NATUR CYMRU

A Review of Wildlife in Wales

Rhif/Number 16 • Hydref/Autumn 2005

- Six rare moths
- Hen harriers
- The leek
- Cornchwiglen
- A 'secret' valley
- Grasshoppers
- Biodiversity and the National Trust

PLUS Books, News, Comment...

NATUR CYMRU
A Review of Wildlife in Wales

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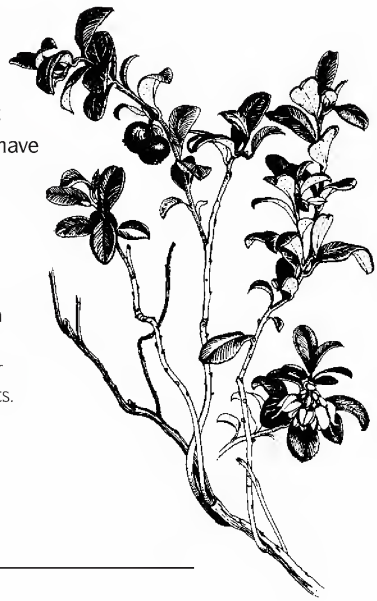

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NATUR CYMRU GOLYGYDDOL

Mae ebost gan danysgrifiwr wedi gwneud i mi feddwl. Er iddo fwynhau'r cylchgrawn, roedd yn teimlo nad oedd digon o afael ynddo, ac y dylai fod yn delio â materion o bryder, deddfwriaeth a hyd yn oed gwleidyddiaeth amgylcheddol. Pa mor wir yw hyn, meddyliais, a faint o bobl sy'n credu hyn?

Efallai fy mod i'n fwy cyfforddus gydag erthyglau sy'n dathlu byd natur na chyda byd mwy pigog gwleidyddiaeth amgylcheddol. Dyna galonogol yw darllen am yr hyn y mae'r Ymddiriedolaeth Genedlaethol yn ei wneud er lles bioamrywiaeth; a darganfod y gallwch adnabod sioncyn y gwair drwy ei gân, gan ddefnyddio darganfyddwr ystlumod, ac ail-fyw'r foment brin honno pan fo bod tinwyn yn hedeg yn isel dros y rhostir o'ch blaen.

Eto mae adrodd am bynciau cadwraeth yn rhan o'n pwrpas hefyd, ac nid ydym wedi gochel rhag erthyglau sy'n mynd i'r afael â phynciau dadleuol, fel ochr ddrwg ail-gyflwyno bywyd gwyllt, gor-bori yn yr ucheldiroedd, neu fanteision ac anfanteision ffermydd gwynt. Mae gen i'r llythyrau i brofi hynny.

Pip Perry

Bu'r amgylchedd yn berthynas dlawd i ddatblygiad erioed, pan mae'n fater o bolisi, a chyllidebau. Ar yr wyneb, newyddion da yw datblygu Strategaeth Amgylcheddol i Gymru; ac yn ein cylchgrawn diwethaf roedd gwahoddiad i'r darllenwyr roi sylwadau ar ddogfen ymgynghorol y Strategaeth Amgylcheddol.

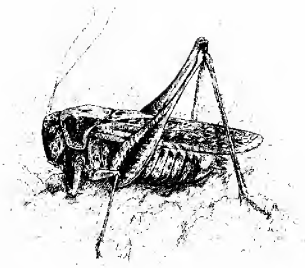
Rwy'n gobeithio y bydd rhai ohonoch wedi gwneud hynny, ac y bydd y Strategaeth, pan gaiff ei chyhoeddi, yn adlewyrchu'ch sylwadau. Mae gwleidyddion yn gwybod faint y mae'r amgylchedd yn ei olygu i lawer o bobl – mewn un arolwg, roedd mwy o bobl yng Nghymru yn ystyried eu bod yn hapus nag mewn unrhyw ran arall o'r DU, ac roedd hyn yn uniongyrchol gysylltiedig ag ansawdd yr amgylchedd naturiol. Felly gallai'r Strategaeth ddod â'r amgylchedd i galon y Llywodraeth yng Nghymru.

Ond hefyd, gallai'r Strategaeth fod yn fater o nifer o eiriau, ychydig o weithredu. A fydd Llywodraeth y Cynulliad, drwy'r Strategaeth, yn gallu rhoi gwir arweiniad ar faterion amgylcheddol? Byddai digon o staffio ac arbenigedd yn hanfod i'r arweiniad hwnnw. Fel mae'n erthygl *Cymru a'r Byd* yn ei ddangos, bydd angen arian os ydym i gael yr amgylchedd rydym ni eisiau; os yw'r cyllid i gytundebau rheoli a chynlluniau SoDdGa er budd natur yn mynd yn llai, fel mae'n ymddangos sy'n digwydd, bydd dyheadau'r Strategaeth yn swnio'n ffals. Gallai fod yn ddim mwy na chyfle i gael lluniau, sloganau da, ond ddim o wir fantais i'r amgylchedd.

Os hoffech fwy o sylw i faterion fel hyn – efallai golwg ddwfn ar sut y cafodd dogfen Bolisi'r Cynulliad *Ffermio i'r Dyfodol* ei gweithredu – gadewch i mi wybod. Mae croeso bob amser i syniadau – ac erthyglau. Os oes digon yn cyrraedd, efallai y bydd yn rhaid i mi gychwyn tudalen lythyrau.

James Robertson

NATUR CYMRU EDITORIAL



An email from a subscriber has given me pause for thought. Although he enjoyed the magazine, he felt it lacked bite, and should be dealing with issues of concern, legislation and even environmental politics. How true is this, I wondered, and how wide a perception?

Perhaps I am more comfortable with articles which celebrate nature than I am with the more fractious world of environmental politics. How encouraging to read about what the National Trust is doing about biodiversity; to discover that you can identify grasshoppers by their songs, using a bat detector; and to re-live the rare moment when a hen harrier skims low over the moors before you.

Yet reporting on conservation issues is also part of our purpose, and we have not shied away from articles which tackle controversial subjects, such as the downside of wildlife re-introductions, overgrazing in the uplands, or the pros and cons of wind farms. I have the letters to prove it.

The environment has been the poor relation of development in all its forms when it comes to policy, and budgets. On the face of it, the development of an Environmental Strategy for Wales has to be good news; and in our last magazine we carried an invitation to readers to comment on the Environment Strategy consultation document.

I hope some of you will have done so, and that the Strategy which emerges will reflect your comments. Politicians know how much the environment means to many people – in one survey, more people in Wales regarded themselves as happy than in any other part of the UK, and this was directly related to the quality of the natural environment. So the Strategy could bring the environment to the heart of Government in Wales.

But equally the Strategy could be a case of many fine words, little action. Will the Assembly Government, through the Strategy, be able to provide real leadership on environmental issues? Adequate staffing and expertise would surely be a necessary precursor to leadership. As our *Wales and the World* feature points out, money will be needed if we are to get the environment we want; if the funding of SSSI management agreements and schemes to benefit nature declines, as seems to be happening, the Strategy's ambitions will ring hollow. It could end up providing a photo-opportunity, a sound bite, but no substantial environmental gain.

If you would like more coverage of issues like this – perhaps an in-depth look at how the Assembly's policy document *Farming for the Future* has been implemented – why not let me know? Ideas – and articles – are always welcome. If my postbag is big enough, perhaps I'll have to introduce a letters page.

James Robertson

A peek at **the Leek...**

What does the choice of the leek as national symbol reveal about the Welsh nation? The modest graphic attributes of this useful vegetable mean that it has lost headway to the daffodil in recent years, but it still has compelling symbolic virtues. ***PETER MARREN*** *considers the cawl of botany, history, myth and legend, and why the leek can still stir national feelings.*

Paul Glendell

Why doesn't the interesting logo of CCW contain a leek? There's a dragon there of course, and from the sploshing water underneath it certainly looks as though it has taken a leak. But the real thing, the mystical green-and-white ceninen, the *Allium porrum* of St David's Day, seems to have been overlooked. Though this is deplorable, it is also understandable. Unlike the rose, thistle and shamrock, the leek does not have the makings of striking iconography. A kind of bulbless onion, it has only a thick stem and a bunch of leaves for an artist to play with. The most promising things about it are the contrasting colours of green and white and the broad, reflexed leaves which looked well on the back of the £1 coin - though one can imagine foreigners being puzzled by it.

Baffling foreigners is, of course, one of the purposes of a national emblem. They should not be too easy to understand. Indeed they should embody patriotic feelings that only a native of that country could possibly understand. We outsiders may recognise the symbolism of the leek, up to a point, but we cannot feel it in the same way. Take the thistle, the emblem of your Celtic cousins up north. It is perhaps the most iconographic of all the national emblems with its martial air and prickliness, explained by its Latin motto *nemo me impune lacessit*. Tread on me and regret it. Understanding why the thistle stands for Scotland requires a knowledge of history, and especially Scotland's relations with England (a night spent in a Scottish pub can teach you a lot about the thistle).

The English rose has lost much of its symbolic power, along with English patriotism. It is widely misunderstood, but I think Gerard, the herbalist, came close to its original meaning when he referred to 'the love of the heavenly powers' enshrined in the humble dog-rose. Roses are about love, that is, a love of one's country. 'I vow to thee my country' is a rose-scented hymn.

The shamrock of Ireland of course embodies the Trinity in its trefoil leaves. Attempts to identify a biological shamrock plant are missing the point. The Cotton Thistle is sometimes called the Scottish Thistle because it resembles certain representations of the thistle emblem. But that is coincidence: the thistle, like the shamrock and the fleur de lys, is a plant of heraldry, not of biology. The shamrock is at once any trefoil flower and none of them. It should remind Irishmen of the heavenly powers that protect their island, not whether the pedicels are hispid or glabrous.

As for the leek, it is presumptuous of me, a sort of English mongrel, to write about such a sacred object in a Welsh journal. I do so humbly and from an amateur interest in the symbolism of plants. Like the shamrock, the leek is associated with a saint: Saint David, Dewi Sant. David was a holy man, a missionary and a founder of monasteries. Apart from that he was a vegetarian. He lived on nothing but bread, water, herbs (watercress has been suggested) and leeks. Despite that, or perhaps because of it, he was a strong, tall man and lived to a ripe old age. David was formally canonized 600 years after his death in 1120, but long before that he was remembered as a man in whom God's power had worked wonders.

Leeks came into these stories in a significant way. In one of them Welshmen going into battle against the Saxon foe passed through a field of leeks. Dewi Sant ordered each man to pluck a leek and wear it in his hat. The leeks served as badges of identity in battle, but it is hard not to feel that they also bestowed a kind of heavenly protection through the intercession of the saint. The story, true or not – and in such things, as with the botanical shamrocks, the lesson, the inner truth, matters more than historical fact – established a custom. Welshmen are said to have worn leeks in their helmets at the Battle of Heathfield in AD634, in which they had their revenge on the Saxons, and also at the Battle of Crecy in 1347. In Henry V, Shakespeare makes the leek a running gag between the patriotic Welshman Fluellen and the bombastic Englishman Pistol. It ends with Pistol being forced by Fluellen to eat a raw

Wild leek

leek. Recruits to Welsh regiments in the British army still submit to eating raw leeks as a rite of passage. The expression 'to eat one's leek', meaning to submit to humiliation under compulsion, has passed into the language. Shakespeare obviously knew how Welshmen felt about leeks and insults to their national honour.

The leek evidently became a symbol of St David's Day, if not St David himself, early on in the tradition. The bard Taleisin, writing within a century of the death of Dewi Sant in AD 589, mentions leeks (and if anyone can give me the context, I'd be very grateful). Leek-related incidents also emerge in *The Mabinogi*, a set of ancient tales first copied down in the thirteenth century. The first English reference, apparently, was in 1536 when Henry VIII integrated Wales with England. To mark St David's Day on March 1st, the king presented his eldest daughter Mary with a leek. That date had been fixed as the feast day of St David back in 1120. Were leeks a ritual part of the day's festivities from the start? They certainly became one. The traditional St David's Day meal, I understand, is a cawl or broth of leeks that Dewi Sant might himself have eaten. Tastier, to my mind, is the alternative, a tart or pasty made with leeks and Welsh cheese.

Why out of Dewi Sant's limited diet did the leek achieve such significance? Perhaps one reason is that the leek was rightly seen as a healthy, in old parlance as a virtuous plant. Quite extraordinary qualities were claimed for it. It was the original health food, high in fibre, good for purging the blood, keeping colds at bay, and for healing wounds. Modern nutritionists discovered that leeks are indeed healthy, rich in iron and manganese, as well as in Vitamins B and C. Regular consumption of leeks reduces cholesterol levels, and hence the risk of heart disease, as well as reducing the risk of certain forms of cancer. Leeks also help to stabilize blood sugar levels. St David, we can be sure, had very low blood sugar levels. The leek also acquired mystic virtues. For example, girls who go to sleep on St David's Day with a leek under their pillow will see their future husband in their dreams. It is tempting to assume that this applies only to Welsh girls. By way of its virtues, which contrast meaningfully with the plant's insignificant appearance, the leek acquired a kind of vegetable sanctity. Like St David, it worked miracles.

Where did Dewi Sant get his leeks? Evidently leeks were even then cultivated as crops, and grew well in the moist, mild climate of west Wales. Were Dark Age leeks the same as modern ones? Or were they more like their probable wild ancestor, wild leek? The emperor Nero is said to have drunk leek juice, not out of pleasure, but medicinally, to clear his voice. Wild leeks are apparently still eaten in Guernsey, but they are bitter and stringy compared with the fat juicy modern variety. Perhaps Dewi Sant ate them as a kind of penance, just as he punished himself by standing neck deep in cold lakes reciting scripture.

I suggest we discount the story that leeks, along with grapes, pheasants, garlic and other good things, were first brought to Britain by the Romans. Such tales presuppose that Britain had no civilization worth mentioning before Julius Caesar arrived, a myth now fully overturned by modern archaeologists. An alternative, contradictory tradition insists that the leek had been adopted by the Druids as a sacred symbol, and that they in turn had got the idea from the ancient Egyptians. They served leek broth at harvest supper, a simple, neighbourly meal that must have contained symbolic connotations. It was certainly not unknown for missionaries to co-opt ancient

symbols and incorporate them into Christian worship. Perhaps, therefore, the harvest custom of *cymhortha*, the feast of neighbourliness, has origins still older than St David.

As for the alternative St David's Day emblem, the daffodil, it is simply a more convenient buttonhole. In Welsh, the daffodil is St Peter's leek, *ceninen bedr*. Unlike the leek it has no depth of history or folklore behind it, and apparently entered the liturgy of St David's day as late as 1920. However, artists jumped aboard the daffodil express because it is an easier symbol to work with. Hence the postage stamps of George VI and our queen up to 1967 portrayed the daffodil, and not the leek, along with the thistle, rose and shamrock. But the national colours of Wales are leek-green and leek-white, not daffodil-yellow.

Since this is a journal about wildlife, perhaps I should end by addressing a minor mystery. If leeks were indeed a staple food of Dark Age and prehistoric Wales, where are their wild ancestors, the wild leeks? Their supposed ancestor, *Allium ampeloprasum* is now classed as an archaeophyte on the assumption that it was introduced to the island of Britain as a crop plant. Yet in Wales, where you might expect it to be, it is virtually confined to two islands, Holyhead Island and Flatholm. On the latter its pink, fuzzy tennis-ball heads are one of the sights of the island, growing thickly around the lighthouse and former army barracks and showing that under the right conditions the wild leek can persist and thrive. Are these leeks descended from monastery gardens, or are they true natives? It is unfortunate that there are no wild leeks growing near St David's or on the sites of his other monasteries. Like that other ancient wilding, woad, the wild leek has all but vanished from the landscape.

Not that this matters a great deal. The emblems of the United Kingdom are flowers of the mind, not of the landscape. Their power comes from feeling, not from botanical science. The leek expresses things about the Welsh which are clearly timeless. What are they exactly? Frugality and practicality must be part of the leek's 'message'. So is the mystic element, the sense of a world beyond immediate experience. The colours of the leek are satisfying, whether you see in them sheep on grass, or snow on the green hills or the Welsh archers at Agincourt. And perhaps most importantly the leek symbolizes the ascetic life of a great patriotic saint, worthy of emulation, who lies at the very heart and foundation of Welsh life and culture. The power of the leek is something that is felt by the heart, not the head. As an English mongrel, I don't really understand it. It would take a Welshman to do that.

***Peter Marren** has written fourteen books about history and natural history. His latest book is a new edition of* The New Naturalists *(see* Natur Cymru *15, p. 42 for review).*

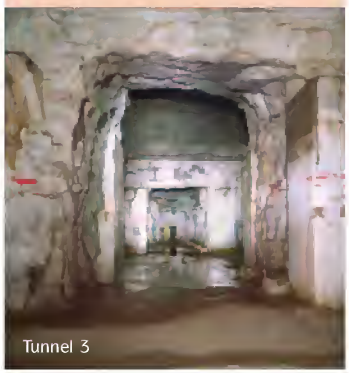
Gwisg hi yn dy gap ac yn dy galon

Gall fod yn anodd deall cefndir symbolau cenedlaethol. Digon di-nod yw'r genhinen i gymharu ag ysgall yr Alban, rhosyn Lloegr a meillionen Iwerddon a beth, tybed, y mae hi'n dweud amdanon ni'r Cymry? Mae cysylltiad rhwng y genhinen a Dewi Sant ac mae sawl cyfeiriad at fyddinoedd Cymru yn gwisgo'r planhigyn wrth frwydro yn erbyn Sacsoniaid. Pan unwyd Cymru a Lloegr gan Harri'r VIII ym 1536, cenhinen a roddwyd gan y brenin i'w ferch hynaf i nodi dydd gŵyl Dewi Sant - diwrnod a oedd wedi ei bennu yn y calendr nôl ym 1120. Efallai mai rhinweddau meddyginiaethol y genhinen a roddodd y fath arwyddocâd i'r planhigyn. Gallai wella clwyfau a gwarchod rhag anwydon ac anhwylder y galon. Tybia rhai mai'r derwyddon a fabwysiadodd y genhinen fel symbol sanctaidd. Ym 1920 yr ymddangosodd y genhinen Pedr fel symbol - does iddi fawr o hanes ond mae'n edrych yn well ar siaced! Os oedd cennin yn fwyd cyffredin yn yr oesoedd Tywyll, lle mae'r cennin gwyllt hynafol erbyn hyn? Dim ond mewn dau fan yng Nghymru y mae'n tyfu - ar Ynys Cybi ac Ynys Erch. A ddaeth y rhain o erddi mynachlogydd neu a ydyn nhw yn wirioneddol wyllt? Pwy a ŵyr - ar ddiwedd y dydd, teimlad yn hytrach na ffeithiau sy'n cynnal fflam symbolaeth genedlaethol yn ein calonnau!

Rhydymwyn Valley

Picture: Brett Carson

The location of a secret research facility, one small wooded valley, beneath which are miles of underground passages, could easily have been obliterated. Instead, it has been preserved for the benefit of the wildlife and people of the area. DAVID GROOM provides the details.



Brian Jones

Tunnel 3

A kite soaring over the Flintshire countryside, looking down at the patchwork landscape of woods, fields and rivers, might be particularly taken with one small valley, although it would no doubt be circumspect about the fencing and signs of an industrial past which it would also see. This is the narrow, U-shaped Rhydymwyn valley, through which the Afon Alyn flows, and it contains what was once a top secret wartime establishment but which is now a wildlife site and environmental centre.

Located only three miles from Mold, the site occupies a parcel of land which, above ground, is 300m at its widest and 1.6km long. Once part of the Gwysaney estate, the site was largely rural in nature, except for limited industrial usage dating back to at least to the 17th century. The earliest plans date back to 1757 and show the presence of lead mines and a foundry in Rhydymwyn. Old maps also indicate a mill house, foundry and saw mill within the valley. However, there is much more than meets the eye below ground: a subterranean world, which has been steadily returning to nature in recent decades.

The X site

The Valley Factory site is the location on an old munitions facility dating from the late 1930s, the factory itself being constructed between 1939 and 1940. This was primarily for the manufacture of mustard gas, its storage, and the assembly of munitions containing mustard gas and other chemical agents. Rhydymwyn was chosen because of its location

in the west of the UK, its narrow valley topography, and the suitability of the western hillside and its underlying rock strata for purpose-built storage tunnels. The course of the Afon Alyn was altered as part of the construction, and the whole length of the river within the site was canalised and culverted. The valley floor was subsequently covered by a complex of over 100 buildings and roadways across it.

The site was the UK's principal mustard storage and production facility during World War II. Some of the earliest research for the Atomic bomb was also conducted on site towards the end of the war. Local inhabitants were led to believe that the factory was used for the manufacture of synthetic rubber and was 'doing its bit for the war effort', although rumours regarding its true nature led to it being called the 'X site'. Its real purpose proved to be one of the best-kept secrets of the war.

Post-war to present

Production of mustard gas ceased before the end of the war and the facility was subsequently decommissioned. The plant was decontaminated as far as possible but some items were disposed of in burial pits and covered with bleach. The site continued to store materials in the underground storage caverns until the late 1950s; however, its use as a chemical weapons facility ceased in 1960. From then until 1994 it was used as a storage depot by the Ministry of Agriculture, Fisheries and Food (MAFF) and managed by the Property Services Agency. In 1994 the Building Estates Division of MAFF (subsequently the Estates Strategy Services Division of DEFRA - Department of Environment, Food and Rural Affairs) became responsible for the Valley Factory site, and it ceased to be a buffer depot, with the buildings and land alike lying unused and undisturbed for the last decade. Current management of the site's estate fabric is undertaken by Carillion, a facilities management and construction services company, on behalf of DEFRA.

Remediation works

From 1994 when MAFF/DEFRA took on responsibility for the site, extensive surveys were undertaken to determine the levels of contamination and risk of pollution into the local environment. As a result, two years ago BAE systems were commissioned to carry out improvements to the site. These included demolishing some of the existing buildings, capping toxic burial pits to seal areas of potential pollution, installing additional boreholes for groundwater monitoring, and wildlife enhancement. A management building was also constructed to improve the existing facilities and provide a study centre to be used for meetings and education. These works were undertaken during the first half of 2003. River works were also undertaken at the southernmost section of the site, including diverting the river channel and revetment of banks, as a result of the flooding in 2000.

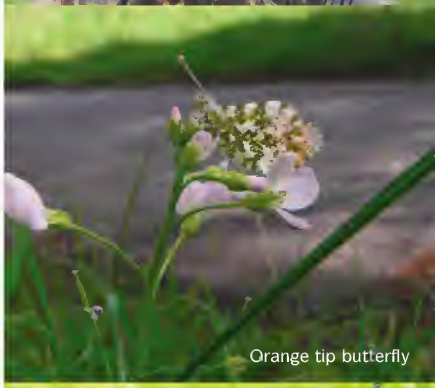
David Groom

Ramsons

Karen Williams

Kestrel chick

Sando Citra



Orange tip butterfly

Sando Citra

Common blue butterfly

Rhydymwyn nature reserve

Ten years ago the Rhydymwyn site was an ex-munitions facility and storage depot that was perceived to be of little use or benefit for the local community. However, during the remediation works in 2003 the findings of Cheshire Ecological Services, confirmed by CCW, identified its potential to be a valuable wildlife site.

Since decommissioning took place over 50 years ago there has been no public access and the area has remained relatively undisturbed. This has allowed the existing wildlife to develop and for the site to become a haven for a variety of species. As a result there is great potential to manage and develop the site for its wildlife. DEFRA local management, conscious of the wildlife and historical interest, have decided that the long term aim should be to develop the site as a nature reserve.

Deeside Urban Wildlife Group (DUWG) have experience of managing sites important for wildlife and people, and have therefore been brought into the picture. The group, in partnership with DEFRA, have agreed to manage the wildlife interest of the site for an initial period of 10 years. Carillion staff on site also assist DUWG in implementing wildlife management works.

Wildlife and habitats

The site is divided into two principal habitats: broadleaved woodland which occurs on the western valley side, and a mosaic of neutral grassland and other habitats in the valley floor. There are roosting lesser horseshoe and other bat species, three of the four widespread reptile species, and the potential for encouraging other notable species including dormouse and otter. The site also has nearly 70 recorded species of birds, including several of conservation concern.

David Groom

Reptile training day

David Groom

The woodland on either side of the valley is a remnant of the woodland that would once have covered much of the local area. The woods within the valley site itself have developed from old hedgerows and woodland blocks that are shown on the earliest maps for the area. This woodland is comprised primarily of ash with oak and sycamore also present in the canopy, and in this respect is typical of such western woodlands. The understorey contains hazel, hawthorn, holly and elderberry, and the ground flora is a rich carpet of species such as bluebells, ransoms, wood sorrel and opposite-leaved golden saxifrage. The woods also support an array of breeding birds including pied flycatcher, great spotted woodpecker, bullfinch and the increasingly rare marsh tit. The latter two species are UK red list species and have faced serious decline in the last 30 years. Sympathetic woodland management will attempt to encourage breeding on site by the common dormouse, which occurs in woodlands in the local area.

The valley floor, which was originally the floodplain of the river Alyn, has been subject to considerable modification from its natural state: nevertheless, this part of the site still supports much wildlife interest. The southern section was grazed by sheep for about 20 years. This may have helped in increasing the floral interest over time and allowed a more diverse grassland sward to develop. Previous surveys have identified this as lowland neutral grassland.

Most of the remaining grassland has been classed as improved grassland. In reality, however, a mosaic of habitat types exists, from low diversity grassland through to areas of tall, ruderal vegetation and scrub. In the northern section a number of mounds where buildings have recently been demolished have been reseeded with a wildflower mix or low maintenance grasses. This mosaic of habitats helps to support

populations of common lizard, slow worm, and grass snake, all becoming increasingly rare in the UK. There is the potential to sustain populations of all three of these species at Rhydymwyn. Management of these habitats will also aim to encourage species such as tree sparrow, linnet and song thrush to breed on site. These have been identified as birds of conservation concern in Clwyd.

Several bat species use the site, the most notable being the lesser horseshoe bat. Other bats recorded include pipistrelle, brown long-eared bat and noctule. A key aim of the management is to encourage increased use and breeding by lesser horseshoes, a species of European conservation concern.

Appropriate management of the riparian habitat at the southern end of the site is aimed at encouraging otters to use the Afon Alyn. Otters are wide-ranging and have been recorded from other locations along the Alyn including nearby Loggerheads Country Park, where the species is known to breed.

A resource for all

The Valley site has had a poor image for many years with the local community. There is now a great opportunity to change that, by encouraging access and the involvement of local people in the site's development. This is happening through the Friends of Rhydymwyn Valley (FORV) and a Joint Consultative Board (JCB). Both bodies aim to manage the site for the benefit of the community as a whole. The JCB will decide on the appropriate management/use of the site.

Now that a plan has been agreed, DEFRA, DUWG and the local community have begun active management at Rhydymwyn. The historical importance of the site will be developed with the assistance of Clwyd-Powys Archaeological Trust and local historical societies. To this end a plan to manage the historical interest of the site is being produced.

Working together DEFRA, Carillion, DUWG and FORV aim to create a site that both conserves local habitats and species and is a resource that can be enjoyed by the local community and other visitors, for both its wildlife and historical interests.

Acknowledgements

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After working for both English Nature and CCW, **DAVID GROOM** *is currently Wildlife Reserves Manager for North East Wales Wildlife (formerly Deeside Urban Wildlife Group) and is based at Rhydymwyn.*

Pip Perry

Dirgelion Rhydymwyn

Pwy feddyliai bod y fath gyfrinachau yn llechu yng nghwm tawel Rhydymwyn, ger yr Wyddgrug? Hen safle milwrol oedd hwn, prif safle'r DU ar gyfer cynhyrchu a storio arfau nwy mwstard yn ystod yr Ail Ryfel Byd. Ni wyddai pobl leol am yr hyn a oedd yn digwydd yma - fel 'Safle X' y câi ei adnabod. Ers ei ddigomisiynu, dros 50 mlynedd yn ôl, mae'r safle wedi cael llonydd i ddatblygu yn hafan i fywyd gwyllt. Dau brif gynefin sydd yma, sef coetir llydanddail a glaswelltir, ac mae amrywiaeth dda o famaliaid, ymlusgiaid ac adar yn gysylltiedig â nhw. Datblygu'r safle fel gwarchodfa natur yw'r nod erbyn hyn, gan adeiladu ar y gwaith glanhau a diogelu a ddechreuodd nôl ym 1994. Grŵp Bywyd Gwyllt Glannau Dyfrdwy sydd â'r cyfrifoldeb pennaf am reoli'r bywyd gwyllt dros y ddegawd nesaf. Byddant yn gwneud hyn drwy geisio gweithio gyda phobl a chyrff lleol, fel y caiff y gymuned fudd o'r safle a fu'n gymaint o ddirgelwch iddyn nhw yn y gorffennol.

David Groom

Breeding toads

Hynt a Helynt **yr Hen Het**

RSPB

Er ei fod yn aderyn cyfarwydd o ran ei olwg, ac yn hoff gan lawer ohonom, mae'r gornchwiglen wedi cael amser go galed dros y ganrif a hanner ddiwethaf. Mae ymdrechion ar y gweill i geisio atal tranc yr aderyn yng Nghymru; mae ELINOR GWYNN yn disgrifio yma, er enghraifft, y gwaith diweddar ar aber y Ddyfi sydd wedi llwyddo creu cynefin sy'n denu cornchwiglod i nythu. Ond rhaid i ni beidio â thwyllo'n hunain – bregus o hyd yw sefyllfa'r aderyn hwn yng Nghymru.

Â min yr awel, sefyllian yn nhawelwch
Y llethr. Gweld cornicyll y waun
Yn ei gap pig-ôl
Yn turio fel proletariat
Ar gramen y siglennydd,
Yn crafu byw, yn palu â'i big
Ar fron y gweundir a'r mynydd-dir noeth.
Yn turio'n ddistaw yn y baw heb godi ei ben[1].

Mae yna rai adar, o gael eu crybwyll mewn cerdd neu ddarn o ryddiaith, yn llwyddo ar amrantiad i gyfleu awyrgylch lle neu ymateb awdur i'w amgylchedd. Adar fel y dylluan, y gylfinir a hefyd y gornchwiglen, a gafodd le amlwg ar ddechrau'r gerdd *vers libre* fuddugol hon yn Eisteddfod Genedlaethol Eryri a'r cyffiniau eleni.

Y dyddiau hyn, mae'n ddigon tebyg mai teimlo rhyw dristwch a hiraeth y bydd llawer wrth ddarllen cyfeiriad fel hwn at gornchwiglen. Oherwydd sawl un ohonom, tybed, sy'n gallu dweud ein bod wedi clywed neu weld un o'r adar trawiadol hyn o fewn ein milltir sgwâr yn ystod y bum mlynedd ddiwethaf? Mae tranc yr aderyn hwn yng Nghymru yn hysbys ac nid yw cynlluniau amaeth-amgylchedd y ddegawd ddiwethaf wedi llwyddo atal y dirywiad cyffredinol difrifol yn niferoedd cornchwiglod dros ran helaeth o'n cefn gwlad.

Mae'n anodd dychmygu pa mor gyffredin fu'r gornchwiglen yn y gorffennol. Roedd yn aderyn cyfarwydd ar hyd a lled Prydain ac Iwerddon yn ystod y 19eg ganrif ac yn wir roedd nifer helaeth ohonynt yn nythu ym Mharc Richmond yng nghanol Llundain yn y 1830au. Newidiadau i'r cynefin a chasglu wyau oedd wrth wraidd llawer o'r dirywiad a ddigwyddodd yn ystod y ganrif honno. Roedd cryn alw am yr wyau, a ystyriwyd yn ddanteithion bryd hynny – er enghraifft, fe anfonwyd 2,500 o wyau o Romney Marsh i farchnad Dover mewn un blwyddyn yng nghanol y 19eg ganrif. A phan agorwyd rheilffordd yr ucheldir yn yr Alban tuag at ddiwedd y ganrif honno, gan greu cysylltiadau cyflymach gyda marchnadoedd Lloegr, cynyddu'n syth ac yn sylweddol y gwnaeth y gweithgaredd casglu wyau. Yn Iwerddon wedyn, er nad oedd cymaint o fynd ar gasglu wyau, arferai heidiau o gornchwiglod gael eu dal mewn rhwydi yn ystod yr hydref ar gyfer eu bwyta. Er i Ddeddf Gwarchod Cornchwiglod, yn 1926, adfer y boblogaeth i raddau, parhaodd y dirywiad tymor hir gyda dyfodiad y chwyldro amaethyddol yn 1945. Ystyrir mai o gwmpas 1920 y dechreuodd y gornchwiglen ddioddef o ddifri' yng Nghymru, a newidiadau i'r cynefin oedd yn bennaf gyfrifol. Roedd y datblygiadau amaethyddol a ddigwyddodd wedi'r Ail Ryfel Byd yn rhai enbyd i'r gornchwiglen – yn eu plith roedd diflaniad tir pori traddodiadol, gwella tir ymylol, cynnydd mewn lefelau stocio a diflaniad ffermydd cymysg, dyfodiad peiriannau trwm a newid i dyfu cnydau grawn yn yr hydref yn hytrach nag yn y gwanwyn.

Nôl ym 1987, mewn arolwg a gynhaliwyd gan y BTO, canfuwyd 7,448 o barau o gornchwiglod yn nythu yng Nghymru a hynny yn siroedd Gwent, Morgannwg, Môn, Dinbych a Fflint yn bennaf. Pan ail adroddwyd yr arolwg sampl yma ym 1998, dim ond 1,698 pâr o gornchwiglod gafodd eu cyfrif. Roedd hyn yn gyfystyr â lleihad o 77% yn y boblogaeth fridio - a hynny dros gyfnod o ddegawd yn unig[2]. Nid yw'r gornchwiglen yn nythu bellach yn y mwyafrif o siroedd Cymru.

Mae'r aderyn yn fwy niferus yng Nghymru yn ystod y gaeaf, pan fydd yn treulio amser ar hyd ein glannau, yn enwedig yn ystod cyfnodau pan fydd tywydd caletach ymhellach i'r dwyrain. Y safleoedd gaeafu pennaf ar gyfer y gornchwiglen yw aber y Ddyfrdwy, cilfach Porth tywyn, bae Caerfyrddin, aber afonydd Cleddau ac aber y Ddyfi. Mae'n ddigon posib bod y profiad o weld yr heidiau gaeaf hyn wedi creu camargraff i lawer dros y blynyddoedd ynglŷn â sefyllfa gwirioneddol ddifrifol y gornchwiglen fel aderyn bridio yng Nghymru.

Cedwir llygad ofalus bellach ar safleoedd nythu mwyaf allweddol cornchwiglod Cymru. Dangosodd arolwg o adar Cymru 1999-2000[3] mai aber y Ddyfrdwy, gyda 248 o barau, sy'n cynnal y ganran fwyaf arwyddocaol o safleoedd nythu cornchwiglod Cymru. Nytha'r mwyafrif o'r parau hyn mewn caeau India corn ond nid oes llawer o'r cywion yn llwyddo gadael y nyth. Yn wir, dros Gymru gyfan, amcangyfrifwyd yn 2000 bod pob pâr ond yn cynhyrchu, ar gyfartaledd, 0.61 cyw sy'n llwyddo gadael y nyth - cyfradd sydd ond yn ddigon, efallai, i gynnal y boblogaeth.

Dros y blynyddoedd, gwelwyd newid yn y math o gynefin a ffafrir gan y parau bridio hyn, gyda dirywiad arwyddocaol yn y defnydd o laswelltir amaethyddol (Tabl 1). Hen laswelltir llaith a thwmpathog oedd un o brif gynefinoedd y gornchwiglen yn y gorffennol ac mae'r newid yma yn adlewyrchu gwir ddirywiad ym maint arwynebedd ac ansawdd y cynefin hwn dros y blynyddoedd.

Tabl 1: Y cysylltiad rhwng nifer y parau bridio (fel canran) a gwahanol gynefinoedd yn arolygon BTO 1987 ac 1998 ac yn yr arolwg o safleoedd allweddol (fel yr adroddwyd yn 2002[4])

	1987	1998	Arolwg safleoedd allweddol 1999-2000
Tir âr	23%	33%	36% (cnydau gwanwyn)
Glaswelltir amaethyddol	77%	31%	39% (heb fod yn cael ei reoli'n arddwys)
Tir heb fod yn dir fferm	3%	33%	16% (tir diwydiannol)
Gweundir a morfa heli			9%

1: Un o'r llifddorau a osodwyd er mwyn rheoli lefelau dŵr ar y tir

Ross Willis RSPB

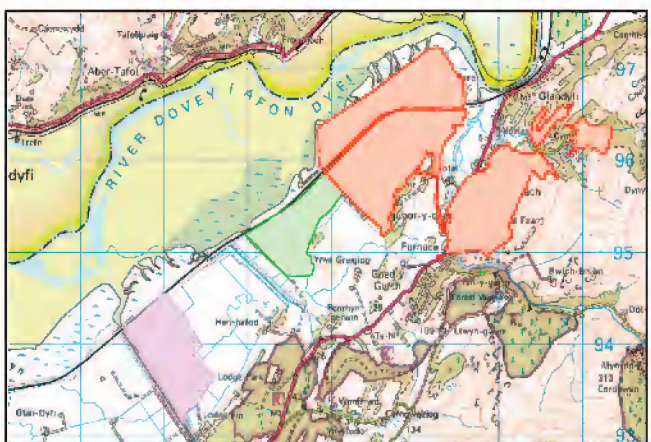
Mae'r ffaith bod adar yn crynhoi ar dir âr (sy'n cyfri am llai na 3.5% o arwynebedd tir Cymru) a bod safleoedd diwydiannol yn cynyddu mewn pwysigrwydd yn pwysleisio mai dirywiad hen laswelltir amaethyddol yn un o'r ffactorau sy'n bennaf gyfrifol am dranc yr aderyn hwn.

Ond nid yw'r darlun yn gyfan gwbl ddu. Creu gwell cynefin ar gyfer adar rhydiol fel y gornchwiglen yw un o brif amcanion cynllun uchelgeisiol Tir Gwlyb i Gymru - menter ar y cyd rhwng nifer o gyrff amgylcheddol sy'n cael ei ariannu'n sylweddol gan Gronfa Dreftadaeth y Loteri. Y darn cyntaf o dir a brynwyd gan y fenter oedd caeau Penrhyn-gerwyn, i'r gorllewin o warchodfa Ynys-hir yr RSPB, ar gyrion aber y Ddyfi. Rhyw 74 ha o dir wedi ei wella oedd hwn ac fe'i rheolwyd fel tir pori ar gyfer gwartheg a defaid. Roedd ffosydd cul a serth ar ymylon y caeau yn creu draeniad da, er eu bod yn llawn o brysgwydd gan fod ffensys yn atal y stoc rhag mynd atynt i'w pori.

Gyda'r nod o gynyddu nifer y cornchwiglod o 5 i 40 pâr ar y safle, aed ati i drawsnewid rheolaeth y cynefin hwn. Gosodwyd llifddorau ac argaeau yn y mannau lle'r arllwysai'r ffosydd i'r aber neu i'r Afon Ddu, er mwyn gallu rheoli'r lefelau dŵr ar y tir a chodi'r lefel trwythiad (ffigur 1).

Cliriwyd ac ail-luniwyd 2855m o ffosydd hefyd fel eu bod yn gweithredu fel ffensys gwlyb ac yn darparu cynefin bwydo addas ar gyfer y cywion, sydd hefyd nawr yn gallu croesi o gae i gae ar draws y ffosydd lletach hyn gyda'u hymylon mwy graddol (Ffigur 2 a 3). Mae diflaniad y gwrychoedd a'r pyst ffens hefyd wedi golygu nad oes cymaint o fannau bellach lle gall adar ysglyfaethus orffwyso a chlwydo. Mae patrwm y pori wedi ei drefnu'n ofalus er mwyn creu amodau delfrydol ar gyfer nythu, gydag ardaloedd o ddŵr agored yn y darnau isaf o'r glaswelltir. Yn ychwanegol at y tir hwn ym Mhenrhyn-gerwyn, prynwyd 92 ha o dir amaethyddol cyfagos ar fferm Lodge ac mae gwaith rheolaeth tebyg wedi digwydd ar y tir hwnnw erbyn hyn, gyda'r bwriad yma eto o gynyddu nifer y cornchwiglod o 5 – 40 pâr. Mae'r ddau safle yma, ynghyd â pheth o laswelltir agored gwarchodfa Ynys-hir yn cwmpasu dros 200 ha o gynefin a reolir yn benodol ar gyfer y gornchwiglen (gweler y Map).

Mae adar wedi ymateb yn dda i'r newidiadau rheolaeth. Mae nifer y cornchwiglod sy'n nythu yma wedi codi o 5 pâr ar y ddau safle nôl yn 2001 i 19 yn 2002, i 32 pâr yn 2003 a 64 pâr yn 2004. Mae'r cynnydd wedi parhau yn gyson ar dir fferm Lodge, er i niferoedd y parau ostwng ar dir Penrhyn-gerwyn ac Ynys Hir yn 2005 – efallai oherwydd i adar a nythod gael eu hysglyfaethu yn fwy eleni ar dir llai agored y safleoedd hyn. Ond mae cynhyrchedd yr adar wedi bod yn uchel, ac wedi codi o 0.6 i 0.8 cyw o bob nyth, ar gyfartaledd. Nid adar newydd yw'r rhain sydd wedi dod i nythu ar y tiroedd hyn – mae'n debyg eu bod wedi dod yma o rannau eraill o'r aber ac mae cyfanswm y parau ar hyd y Ddyfi wedi aros yn weddol debyg, oddeutu 104 pâr dros y blynyddoedd diwethaf. Ond yr hyn y mae'r prosiect yma wedi ei arddangos yw bod modd creu cynefin sy'n denu nifer uchel o



Ardal prosiect Tir Gwlyb i Gymru ar y Ddyfi : pinc- tir fferm Lodge; gwyrdd – tir Penrhyn-gerwyn; oren – gwarchodfa Ynys-hir

Cornchwiglen a'i chywion

RSPB

Losing the lapwing?

The lapwing has undoubtedly had a rough time in Wales over the last century or so. The dramatic declines in population size and distribution are thought to have begun, in Wales, around 1920, but accelerated after the Second World War due to significant changes in land management practices. Recent efforts to halt the lapwing's demise have included land acquisition and associated habitat management works by the RSPB adjacent to their Ynys-hir reserve on the Dyfi estuary – part of the 'Wetlands for Wales' partnership project, funded by HLF. Initial results have been impressive, both in terms of lapwing numbers and nest productivity. Although the birds, to date, have been drawn from other parts of the estuary, it is hoped that the success of the project will lead, in time, to a real increase in lapwing numbers in the area. RSPB's 'Operation Lapwing' also offers practical advice on management for lapwings – contact **Debbie Scott**, RSPB, on 01248 363800.

Ross Willis RSPB

2: Un o'r hen ffosydd, gydag ymylon serth ac yn llawn prysgwydd

gornchwiglod ac sy'n eu galluogi i fridio yn llwyddiannus. Y gobaith nawr yw y bydd yr adar ifanc o'r safleoedd hyn, wrth iddyn nhw gyrraedd aeddfedrwydd, yn dechrau cynyddu poblogaeth gyfan y Ddyfi.

Nid nifer parau cornchwiglod yw'r unig fesur o lwyddiant y prosiect. Mae'r gwaith hefyd wedi llwyddo cynyddu niferoedd adar yn ystod y gaeaf ; gwelir i fyny at 200 o chwiwell, 560 o gwtiaid aur a 210 o bibyddion mawn yn defnyddio'r tir, yn ogystal â heidiau o gornchwiglod – cymaint â 2500 yn 2003-4. Mae'r nod cychwynnol arall, i gynyddu nifer y pibyddion coesgoch a nythai ar y safle, hefyd wedi ei gyflawni; cofnodwyd 21 o barau, er enghraifft, ar dir Penrhyn-gerwyn, yn 2004.

Ross Willis RSPB

3: Darn o'r un ffos wedi ei chlirio a'i hail-lunio

Mae llwyddiant y prosiect hwn yn rhoi llygedyn o obaith i ni bod yna ddyfodol i'r aderyn hoffus hwn â'i chwiban heintus yng Nghymru. Ond un safle yn unig yw hwn, a thra bod dathlu ar y Ddyfi, roedd y darlun yn dywyllach i lawr yn y cymoedd eleni wrth i safle nythu arall ar hen faes glo ddiflannu o dan ddatblygiad diwydiannol newydd. Mae yna gymorth a chyngor parod ar gael ei rai sydd yn awyddus i reoli tir ar gyfer cornchwiglod, gyda'r Gymdeithas Frenhinol er Gwarchod Adar, er enghraifft, yn cynnig pecynnau sy'n llawn gwybodaeth ymarferol ynglŷn â rheoli cynefin (cysylltwch â Debbie Scott, RSPB ar 01248 363800). Ond er hyn, mae'n debyg mai dal i grafu byw ar diroedd Cymru y bydd y proletariat cap pig-ôl, a hynny am flynyddoedd maith i ddod.

*Mae **Elinor Gwynn** yn aelod o dîm Ardal y Gogledd, Cyngor Cefn Gwlad. Mae ei gwaith cyfredol ynghylch cynllunio strategol a datblygiad partneriaethau.*

Cyfeiriadau

1. Allan o gerdd *Dychwelyd* gan Eirwyn George, Cyfanosddiadau a Beriniadaethau. Eisteddfod Eryri a'r Cyffiniau 2005, cyh. Llys yr Eisteddfod, arg. Gwasg Gomer.
2. *State of Birds Report* 1998.
3. The Welsh Ornithological Society 2002, *Birds in Wales 1999-2000*. Anthony Rowe Ltd.
4. Fel yr uchod.

Roger Brown ARPS

Golygfa tua'r gogledd, o dir Penrhyn-gerwyn, fferm Lodge ac Ynys-hir, ar ochr ddeheuol aber y Ddyfi

Grasshoppers, crickets and their kin - an Orthopteran Odyssey

Sloane Farrell

Stripe-winged grasshopper *Stenobothrus lineatus*

Mottled grasshopper
Myrmeleotettix maculatus

Roger Key

Would you like to get to grips with grasshoppers, crickets and other members of the small but fascinating insect group Orthoptera? You probably will when you have read STEVE WILLIAMS' account of recording in Monmouthshire; these appealing hoppers and chirrupers offer the thrill of the chase, an orchestra of different songs and the prospect of lots of new site and even County records. Now read on...

My earliest recollections of grasshoppers and crickets are from the 1970s when, as a lad, I remember pursuing meadow grasshoppers with one of those 'cheap and cheerful' bamboo-handled kids' fishing nets. But lodged in my memory the most is the distinctive evening 'chip' of the dark bush cricket from Porthcawl's Trecco Bay caravan site. Little did I know that nearly forty years later I would be writing about my endeavours as a County Recorder for Orthoptera.

I suppose my interest in recording invertebrates developed in part due to the Biodiversity Action Plan (BAP) process. Closer attention to the conservation requirements of species other than the more popular and familiar groups such as birds and plants led me to look at how I could make a personal contribution to action locally. At the same time there was a request from Jon Widgey, the former National Recorder for Orthoptera, for more records from Wales and volunteers to fill vacant County Recorder positions. The two things sold me the idea of getting involved in some organised fieldwork. So in 1999 I embarked on an ambitious project to prepare a provisional tetrad-based atlas for the vice county of Monmouthshire.

This, then, is a personal account of biological recording from scratch. It looks at the methods employed and the tools used to record and observe Orthoptera. It examines the habitats in which they can be found and

Field grasshopper *Chorthippus brunneus*

updates the project so far. Above all, I hope it will act as a stimulus to others who have a desire to embark on a study of a less popular taxonomic group.

What are Orthoptera and why are they ideal to study?

The word Orthoptera is taken from the Greek word meaning 'straight wings' and is the group covering crickets, grasshoppers, cockroaches and earwigs. They are generally medium to large sized insects with the exception of the groundhoppers.

The following reasons make grasshoppers and their relatives an ideal group to study, amended from Baldcock (1999).

- They form a small and manageable group.
- They are mostly large and easy to locate.
- They have a long season from early spring to late autumn.
- Most are easy to identify in the field.
- There are good field guides available.
- There is an active National Recording Scheme.
- Their songs make recording much quicker than with other insects.
- They are ideal subjects for photography.

Historical records

The starting point for any self-respecting distribution project should always be a desk study of existing information. What data were already documented and from what area? I had the distribution maps from the UK Atlas but was there anything else available that would help me build a picture of species previously recorded in Monmouthshire? I conducted a literature review of back issues of *Nature in Wales*, *Transactions of Cardiff Naturalists*, Wildlife Trust newsletters, and other miscellaneous books, journals and ecological studies in an attempt to find out what was already known. This produced a small amount of data, and when added to that provided by the National Orthoptera Recording Scheme, it soon became clear that my recording project would be breaking new ground!

Species distribution

For the first time the publication of a national atlas provided a focal point for species distribution not only in the UK but locally as well. It was now possible to determine what was present and where it was and, more importantly, where the gaps were. However, close inspection of the distribution maps covering southeast Wales made depressing reading. Few 10km squares had any records, returning a species-poor total of only 14 for the area, compared to a total of 35 nationwide.

Project progress to date

Monmouthshire has a rich natural heritage supporting a broad range of habitats. At the outset of this atlas project I was optimistic that this variety would produce a similarly diverse Orthoptera fauna. Five years on, most tetrads have been visited at least once, producing numerous new 10km and 2km records. Species previously thought to be rare or with restricted distributions have proved the opposite, and eagerly awaited new county records secured. The county total now stands at 17.

Grasshoppers

Of the grasshoppers present, common green grasshopper *Omocestus viridulus*, field grasshopper *Chorthippus brunneus* and meadow grasshopper *Chorthippus parallelus* are widespread. Any patch of semi-improved grassland, whether rural or in an urban setting, will support one or more of these grasshoppers. Field grasshopper is probably the most

Meadow grasshopper *Chorthippus parallelus*

selective, being more at home where bare ground combines with species rich grassland. The habitats of the former industrialised western valleys and the post-industrial land in and around Newport provide a suitable environment for this grasshopper.

Where colliery spoil has escaped ill-conceived land reclamation schemes, patchy re-vegetation of acid grassland and dwarf shrub heath is ideal for the mottled grasshopper *Myrmeleotettix maculatus*. Cryptically coloured, this insect is at home on the bare ground that is such a feature of coal spoil. Still widespread and plentiful in the coalfield, it is rarely found elsewhere in the county. Should colliery spoil continue to be viewed in a negative light, then the loss of this and other species such as the grayling butterfly *Hipparchia semele* is a real possibility.

Just like the mottled grasshopper, the lesser marsh grasshopper *Chorthippus albomarginatus* has a habitat preference. Found commonly in saltmarsh habitat along the Severn Estuary it is also at home in low lying marshy grassland habitat in and around the Gwent Levels, as well as floodplain grasslands of the Usk Valley. Other more unusual sites are industrial estates where land was cleared in preparation for development. Many of these sites hold water seasonally, and include bare soil and sparse but increasing plant coverage. One such Welsh Development Agency site supported at least eight orthoptera, including lesser marsh grasshopper and short-winged conehead.

Groundhoppers

Of the three native groundhoppers, two are widespread. Common groundhopper *Tetrix undulata* is regularly found in dry conditions very similar to those frequented by mottled grasshopper. It is often the first Orthoptera to emerge in the spring. Some text books suggest it can be found all year round but my experience is that it appears during the first warm spring weather onwards. This year some appeared in a churchyard near Pontypool from the second week of March. Slender groundhopper *Tetrix subulata*, easily distinguished from its common relative by its long extended wings, requires the bare muddy fringes of ponds and other waterbodies. Often found in considerable numbers, it prefers the lowland habitats of the Gwent Levels, is present at locations such as Magor Marsh and is numerous around the exposed shore of Llandegfedd Reservoir.

Crickets

Great green bush cricket *Tettigonia viridissima* is

lesser marsh grasshopper *Chorthippus albomarginatus*

Severn saltmarsh estuary, mottled and lesser marsh grasshopper habitat

CCW

something of an enigma. Historical records are from two tetrads on the Gwent Levels, but I have failed to locate this cricket here. Its loud and penetrating song, heard from up to 100 metres away, means it's unlikely to be overlooked. By contrast, the long-winged conehead *Conocephalus discolor* is a new record to the county. Noted for the first time in 2004, it is now present in at least three tetrads, including Newport Wetlands Reserve. This came as no surprise as its range expansion is nothing less than remarkable, moving from southern England through to Wales, the Midlands and Norfolk since 1970. The short-winged conehead *Conocephalus dorsalis* is also a success story. At home in reed-dominated pasture, this conehead is widespread throughout lowland Monmouthshire. Now present all over the Gwent Levels, it is also being discovered further north on the outskirts of Pontypool and alongside the River Usk between Abergavenny and Caerleon.

Oak bush cricket *Meconema thalassinum*, dark bush cricket *Pholidoptera griseoaptera* and speckled bush cricket *Lepophyes punctatissima* are relatively widespread. The dark bush cricket is common in hedgerows and bramble thickets, often sharing the same habitat as the speckled bush cricket. Oak bush cricket is slightly less plentiful and is more dependent on mature trees.

Earwigs

Earwigs are instantly recognisable insects and one of the few species easily indentified by the public. One interesting life cycle characteristic is the ability to tend their offspring throughout the journey from egg to nymph. In fact observation of earwig young shows them to be dependent on their parents even after birth. Of the order *Demaptera* only three of the eight species in the UK have to date been recorded in the vice county.

Of these three species, the common earwig *Forficula auricularia* will certainly be ubiquitous, but lesser earwig *Labia minor* distribution is far less certain. The only existing data is from three tetrads where individuals were noted in moth traps. Nonetheless, there is no reason why the lesser earwig should be so scarce. A study of dung heaps in the West Country found them to be widespread. If you're prepared to use the same technique of scratching around in manure, it's feasible that the lesser earwig will turn out to be widespread in Wales as well.

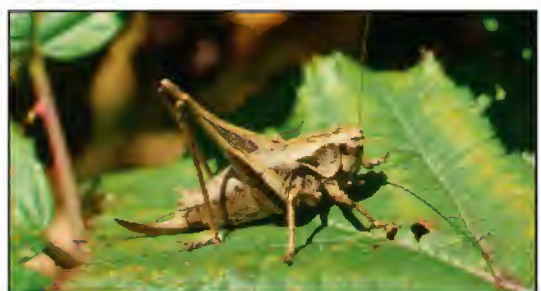
Lesne's earwig *Forficula lesnei* is a different prospect. As a Nationally Scarce (B) species it has a southern England bias and from Wales was only known from the Gower until recently. Locally a new record from Gwent Wildlife Trust's Dan-y-Graig Reserve in the western valleys compliments the first county record of one swept from ruderal vegetation in Cwmbran.

Doctor I've a buzzing in my ear!

According to folklore, earwigs are so called because of their willingness to enter the human ear. Documented reports add weight to this supposition and, given their fondness for dark crevices, it's not too hard to imagine. Although this must be regarded as a very rare occurrence, Maurice Burton, in his book of insects, goes as far as to suggest a way of preventing this happening and describing how to deal with it if it does. This is not the only insect ever recorded entering ears. I remember reading an account of a micro-moth entering the ear of a moth recorder who was light-trapping moths. In a risk-averse society, I'm sure it won't be too long before 'insect in ear' appears on the risk assessment form of public field events.

Non-natives

My first brush with European Orthoptera came in 2000 when I received a phone call from a member of Gwent Wildlife Trust asking if I could identify a large grasshopper found clinging to a shrub



Dark bush cricket *pholideptora griseoaptera*

short-winged conehead *Conocephalus dorsalis*

purchased from a local garden centre. A car park meeting ensued where I was presented with a jar containing the offending insect. A subsequent trawl through field guides finally identified the creature as an Egyptian grasshopper *Anacridium aegyptuim*, which are often imported by the horticultural trade. With human-induced climate change already taking hold and a scenario of worse things to come, could these 'non-natives' become more familiar?

I recall being told by an elderly collier of the presence of 'red Indians' underground in some of the now closed coal mines. The red Indians were of course American cockroaches accidentally introduced to the subterranean environment through imported timber.

The other non-native more recently noted is the house cricket *Acheta domesticus*. Commoner in the days of domestic open-hearth coal fires, its distribution is difficult to define. Previous populations were known from landfill sites. But changes in the way waste is managed and disposed of now mean these habitats are less attractive. However, recent records suggest they can still be found. One possibility of a continued presence is through the pet food trade. A visit to a local animal sanctuary confirmed this as I observed a number of live house crickets sharing the warm accommodation of the Reptile House.

Recording techniques

For those who believe that recording Orthoptera is all about crawling around in undergrowth chasing grasshoppers that always seem to be one 'hop' ahead, think again. Yes, there will be times when hand-searching vegetation is necessary, but other techniques can be far more productive for the active recorder. Sweep netting the field layer for grasshoppers, and more rank grassland, trees and scrub for crickets, is the standard recording technique. It produces excellent results, but be warned, a damaged net is an occupational hazard.

If you're lucky enough to be blessed with hearing that's able to detect the distinctive songs of grasshoppers and crickets, then identifying Orthoptera becomes easier still. Songs or stridulation are as distinctive as those of birds, but some are audible and others are not. The common green grasshopper is our loudest, and along with that of the meadow grasshopper is arguably the characteristic sound of a summer meadow. Crickets too can be recorded by sound. The familiar 'chip' of the dark bush cricket exposes its presence in a bramble thicket or hedgerow. I recall taking a late evening trip around the lanes of the Usk Valley with the explicit intention of recording crickets. With care the dark bush cricket is detectable from a moving vehicle with the window down. Who says recording is hard work?

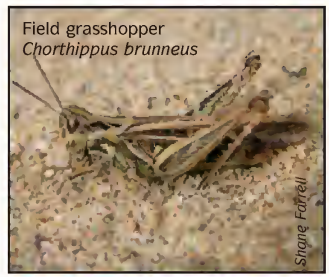
But how is an understanding of Orthoptera song developed? Just like with birds, there is no substitute for getting out in the field and doing the enjoyable work of relating songs to species. But if you want a head start you could do worst than listen to a copy of *A Sound Guide to Grasshoppers and Allied Insects of Great Britain and Ireland*. Also log on to the excellent website of the Environmental Records Centre for Cornwall and the Isles of Scilly (ERCCIS) at **www.erccis.co.uk**. This has a range of songs to download.

Long- and short-winged coneheads can be separated by song, but this will again depend on your hearing. Both species can be found in similar habitat – rush dominated marshy grassland. In this case sweep netting often isn't an option, so the aid of a bat detector has become an invaluable identification tool in separating songs. A bat detector I hear you cry! Yes, bat detectors are not only good for amplifying the songs of grasshoppers and crickets, they can be used for bat detecting as well. But seriously, bat detectors are now part of the tool-kit of all good invertebrate hunters and you don't need to invest in an expensive model either. The only difference between Orthoptera and bats is the frequency in which they operate. This is generally at a much lower frequency

than bats and, depending on what detector you chose, will require a slight factory modification. Another benefit of a detector is the ability to pick up song at a greater distance, which can be saved to a mini-disc recorder to play back on those long winter nights. For example the faint tick of the speckled bush cricket is audible within one metre without the aid of a bat-detector but 30 metres with!

Orthoptera to light

I have already hinted at the value of light in attracting Orthoptera. Instances of insects in moth traps are invaluable sources of information, not only because they help fill the blanks on a dot-based atlas but also by reminding us that many invertebrates can be active at night. Besides the lesser earwig, the oak bush cricket is a familiar sight in outhouses and porches where light has attracted them. I remember one such instance where an individual was attached to a third floor window where it remained throughout the day. Its fair to assume it was lured to the window by the inefficient use of a light left on overnight. Apart from this there is increasing speculation that Roesel's bush cricket and long-winged conehead are expanding their range through nocturnal movement.



Field grasshopper
Chorthippus brunneus

A book in the hand is worth two in the bush!

The recording of Orthopteroids is greatly improved with the advent of the World Wide Web. There is now a wealth of Internet sites with photographs to aid identification and there is even an email forum for interested parties. But if, like me, you prefer the traditional field guide, there are a number standard texts available that are a must.

A good starting point is the excellent guide published in the *Naturalists' Handbook* series. This covers all native grasshoppers and crickets with accessible colour plates. However, one failing is that it doesn't detail groundhoppers! If you want something user-friendly for quick reference in the field, then the fold-out chart produced by the Field Studies Council is indispensable.

If this is not enough and you are motivated to seek more, you will certainly be drawn to the standard text. Marshall and Haes' *Grasshoppers and Allied Insects of Great Britain and Ireland* (Harley Books 1988) is the orthopterists bible. Other accounts are available but some are out of print and will command a premium price in specialist second-hand bookshops. Among the best is David R. Ragge's (1965) *Grasshoppers, Crickets and Cockroaches of the British Isles*, published in the highly collectable 'Wayside and Woodland Series'.

Local atlases

The use of computer recording packages such as Recorder 2000 and the accessible MapMate programme has arguably made it easier for amateur naturalists to store, share and organise data. With this has come a notable increase in local distribution maps for all sorts of wildlife. Orthoptera are no exception. The atlas published through the aforementioned ERCCIS is the most recent county atlas. Amongst the best on the market is that produced by Surrey Wildlife Trust. Others before it cover Essex and Norfolk. The latter is testament to what can be achieved through amateur endeavour.

Climate change, species change

It seems that climate change is never out of the news these days: so is it likely to alter the demographics of Orthoptera in the county? We know that long-winged conehead has expanded its national range significantly over the last decade and species such as Roesel's bush cricket are queuing up in Gloucestershire just waiting for that opportunity to hitch a ride over the Severn Bridge to Wales. But what of other species?

Reading through back issues of the national recording scheme newsletter, it is not hard to see that range expansion is occurring. The presence of southern oak bush cricket *Meconema meridionale as* a new breeding species for Britain in 2001 is a case in point. How much of this is down to climate change as

opposed to increased recording effort is difficult to say, but nonetheless change is occurring. Nationally, a move inland by grey bush cricket *Platycleis albopunctata* from its traditional coastal habitat is significant. Other expansions include oak bush cricket, slender groundhopper, woodland *Omocestus rufipes* and stripe-winged grasshopper *Stenobothrus lineatus*. Neither of the last two is known from the county, but as Roesel's bush cricket is present in the near West Country, it is a tempting thought that they may already be there, just waiting to be discovered.

Towards an atlas

With at least four years of recording, there is now enough information to start preparing provisional maps. This has begun to a limited extent, but further work is planned over the autumn and winter months to have a set of maps available for next season. In the meantime, work will continue this summer, plugging gaps in coverage.

Should you have any records new or old, common or rare, all are appreciated. Please provide details of species, location (with grid reference if possible), date and habitat to grasshoppersvc35@aol.com.

Steve Williams *is a life-long naturalist, Orthoptera Recorder for the vice county of Monmouthshire and Senior Ecologist for Torfaen County Borough Council.*

Acknowledgements

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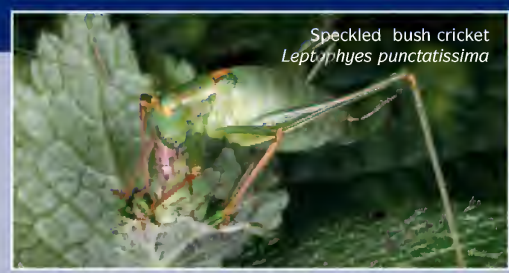
Mynd i'r afael â chriciaid Mynwy

Cofnod personol o gofnodi Orthoptera a geir yma, gan un a ysgogwyd i'w hastudio o ddifrif ar ôl iddo ystyried pa gyfraniad y gallai ef wneud i'w Gynllun Gweithredu Bioamrywiaeth Lleol yn Sir Fynwy. Daeth yn amlwg yn weddol gyflym y byddai ei waith yn flaengar gan mai prin iawn oedd y cofnodion Orthoptera o'r rhan hon o Gymru.



Speckled bush cricket
Leptophyes punctatissima

Roger Key

Grŵp cymharol fychan o ddrychfilod yw'r Orthoptera. Mae'n cynnwys criciaid, ceiliogod rhedyn, cocrotsis a phryfaid clust. Creaduriaid canolig o ran maint a gweddol hawdd eu hadnabod yn y maes - does dim gormod ohonynt ac mae llyfrau da ar gael er mwyn helpu eu henwi!

Bellach, cofnodwyd 17 o rywogaethau yn y sir. Mae nifer o'r cofnodion yn rhai newydd ac yn cyfeirio at rywogaethau a ystyriwyd gynt yn brin neu'n anghyffredin. Mae'r gwaith wedi pwysleisio pwysigrwydd yr amrywiaeth cynefinoedd yn y sir, yn enwedig hen domennydd glo sydd wedi llwyddo dianc rhag cynlluniau tirlunio diweddar, hen safleoedd diwydiannol eraill sy'n wlyb ar adegau o'r flwyddyn a lle ceir llystyfiant tila yn araf ddatblygu. Mae ymylon lleidiog pyllau a llynnoedd hefyd yn gynefin allweddol, ynghyd â gwrychoedd, prysgwydd a glaswelltiroedd llaith ar hyd yr arfordir a dyffrynnoedd afon. Cofnodwyd ambell rywogaeth dieithr hefyd - fel y ceiliog rhedyn o'r Aifft a gyrhaeddodd yma efallai ar nwyddau garddwriaeth. Nid bod hyn yn rhywbeth hollol newydd - roedd yr 'Indiaid cochion' ym mhyllau glo'r ardal yn gocrotsis a gludwyd dan ddaear ar y pren estron. Ac mae'r diwydiant anifeiliaid anwes hefyd wedi bod yn gyfrifol am gyflwyno cricsyn y tŷ i ambell le. Mae ardal ddosbarthiad sawl un o'n rhywogaethau brodorol yn ymestyn - cyfuniad efallai o gynnydd yn yr ymdrech i gofnodi a newid gwirioneddol yn yr hinsawdd.

Caiff y creaduriaid eu hadnabod drwy eu rhwydo mewn llystyfiant tal, eu denu at olau neu drwy adnabod sŵn arbennig y gwahanol rywogaethau. Mae'n ddefnyddiol felly i gael clust fain ond gall datgelydd ystlumod fod o gymorth hefyd. Mae digon o gyfleoedd bellach drwy gyfrwng y we a phecynnau meddalwedd i gofnodi gydag arddeliad a rhannu gwybodaeth gydag eraill er mwyn cynyddu ein dealltwriaeth am y creaduriaid diddorol hyn.

Hen harriers – a passion for bod tinwyn

All photos: RSPB

Brought to the verge of extinction by gamekeepers and the loss of moorland habitat, the hen harrier is fighting back in the uplands of Wales. PATRICK LINDLEY describes this graceful and patient hunter of the moors, and his own passion for a bird which itself requires great patience to track down and observe.

Inspired by the vignette Victorian paintings of Thorburn and Lodge, and more recently those of Donald Watson, who skilfully portrayed courting birds against the mauve backdrop of the Galloway hills, I have since my childhood days had an unerring passion for the hen harrier. I have a library full of notebooks relating many breeding and foraging observations, often accompanied by cameo sketches, of harriers across the UK and Isle of Man. Many describe wonderful days spent in the uplands, watching the zipping flight of merlins, or hearing the evocative calls of curlew when harriers were absent. After all, harrier watching is a rather patient affair, but there are always opportunities for liaisons with other upland 'blue ribbon' birds.

Depending on whatever corner of the British Isles you enjoy as a naturalist, the hen harrier has a rich and varied nomenclature. In Wales the bird is often referred to as *bod tinwyn* (white-tailed kite),or *bod glas* (blue kite). In Scotland, Celtic cousins coined several aptly named local variations such as *breid-air-tion* (white rag on rump) or *clamham luch* (mouse hawk). All were derived from distinctive features,

whether morphological, the white flash of the rump, or behavioural, the prey it feeds on.

Morphology and hunting

The adult male is easily identified by his dapper silvery-grey plumage and white underparts, contrasting with sooty black primaries with a gun metal band along the trailing edge of the underwing. The larger female has a cryptic brown plumage, with a distinctive, cloud-white rump and banded tail (hence the colloquial term 'ring tail'). As with other harrier species, there can be extreme variation in morphology. Watson describes an account of a white hen harrier in Wales in 1970. A trio of bird watchers recorded their brief view of the creamy white harrier quartering over a young forest plantation. The image of a white harrier against an olive green backdrop must have looked rather surreal. There is little or no evidence that the hen harrier has a melanistic or dark phase, but Watson quotes an example of melanism, where a melanistic chick was reported in a nest in north Wales in 1968.

In Wales hen harriers are birds of open country, confined to undulating, heather-dominated moorland during the breeding season. Their long wings and comparatively laborious searching flight do not equip them for successful hunting in close canopy woodland. Their low wing-loading (the ratio of body weight to wing surface) facilitates slow, buoyant, manoeuvrable, sustained flight that allows effective hunting in tall, rank vegetation such as heather and grass. They are remarkably light birds (male 300-400g, female 500-700g) and have a wing-loading capacity half that of the peregrine, a specialist bird of prey evolved for speed rather than manoeuvrability. The advantage of a slow foraging flight is analogous to a golfer searching for a lost ball in the rough en route to the 18th. The sportsman diligently searches slowly, without haste, often repeating the procedure over the same stretch of ground until the ball is located.

The hen harrier's foraging behaviour is relatively easy to study because most hunting is over open moorland. A typical hunting strategy many observers witness is of the harrier zigzagging slowly over the moor, just above stalling speed, usually flying into the wind or at an oblique angle to it, quartering a few feet above the ground. The harrier, head angled down, searching, suddenly pounces with legs extended when prey is spotted. I have repeatedly seen harriers use this foraging flight when they are searching for something they know is there or when they are hunting along habitat edges. As with all wildlife watching, the more you observe hunting harriers the greater the repertoire becomes. For example, studying hen harriers in the Isle of Man, I witnessed birds slipping from one side of a dry stone wall to the other, catching small passerines, such as wheatears, by surprise. This technique is often observed when watching sparrowhawks hunting alongside a hedgerow in a farmed landscape. I recorded similar surprise flights above the canopy in woodland, presumably where tree-feeding birds occur. This observation was supported by remains of woodland birds, such as crossbills, found within nests. Research in western Scotland suggested that harriers foraged preferentially over young first rotation conifer forests, and selected heathland and grassland habitats ahead of close canopy woodland. No foraging studies have been undertaken in Wales, but I suspect foraging harrier preferences will be related, as with other studies, to areas of open upland habitats such as dry heath, young conifer plantings and marginal farmland.

Courtship and breeding

The life history strategy of the hen harrier has several fascinations to the behavioural ecologist intrigued by sociality and parental care. Hen harriers can be semi-colonial where allowed and are often polygynous in nesting. Though studies have recorded up to seven females mated to the same male, two is a more usual number. In Wales, incidents of polygyny are relatively uncommon.

There is a strong relationship between the density of meadow pipits and field voles and the settling density of harriers, which itself is related to the proportion of grass to heather. In my experience, if weather conditions allow, males visit their breeding areas as early as February and, before hares have

boxed over arable, you may be lucky to see a pair of harriers floating lazily over potential nesting territory in March. During April, hen harriers become more evident, with characteristic display flights over potential nest sites on heather moorland. Watching for these aerial flights is a time-consuming process and not always a reliable method of locating breeding pairs. However, to witness these flights on a warm early April day is a real joy. Allow me to give a quick portrayal. The male performs a spectacular display flight, aptly coined 'sky-dancing', in which he hurls himself earthwards as if deranged, from 100-200ft above undulating moorland, twisting and spinning in flight with threshing wings. The display is not only visible from a great distance but is also audible with a staccato yickering of chek-ek-ek-ek calls, which are similar to the alarm calls elicited when an intruder approaches the nest. This elaborate courtship performance is repeated, traversing along a hilltop usually within 0.5km of the nest, or intended nest site.

There is certainly an element of laziness in my passion for harriers. They are big, conspicuous birds of prey, and you can only learn about their behaviour by sitting in the uplands for a long time. A real tangible clue to confirm a pair on their breeding grounds is when the male performs an elaborate transfer of prey, called a 'food pass', to the female. The incoming male, with food draped conspicuously over a lemon yellow foot, contact calls to stir her from the nesting valley. The female rises to meet the male in mid-flight, the male drops his catch in mid-air which is dextrously caught by the female with an outstretched foot. Sometimes the repertoire is changed and the food is transferred in mid-air from foot to foot. The food-pass, a significant feature of courtship, is a delight to watch. If you are not lucky enough to witness this, for a real treat read Donald Watson's account of hen harrier courtship in his superb monograph *The Hen Harrier* (1977).

Status of the hen harrier in Wales

Hen harriers, once common and widespread throughout the UK, were virtually exterminated as a breeding species on mainland Britain during the 19th and early 20th centuries. This was largely due to persecution by game-managers and to a lesser extent land-use changes. In Wales the species had ceased to breed regularly by 1910, with only sporadic breeding up to the 1950s. There was a period of population stability between the 1968-72 and the 1988-91 breeding bird Atlases. However, the Welsh population remained low until 1977, when 27-30 territorial pairs (defined as proven or probable breeding) were recorded.

So how has the Welsh hen harrier population fared recently? The first UK hen harrier survey in 1998 recorded an estimated 28 territorial pairs in Wales. A repeat UK census in 2004 found 43 territorial pairs within the Principality. This increase is a welcome bonus to a population that is considered low. With such an increase, I hope many people will have an opportunity to witness some of the spectacular behavioural traits that I have witnessed over the years. The hen harrier is a special bird and is one of the unique upland denizens that should never be lost as a breeding species.

As a red-listed species of conservation concern, hen harriers have been a high UK and Welsh priority for

many years. Additionally, as part of the Welsh Assembly Government's commitment to fulfilling its duty of conserving biological diversity, the hen harrier is part of a suite of species listed as a Principal Biodiversity Species.

Conflicts and resolution

One of the more contentious conservation issues in the UK concerns the relationship between hen harriers and red grouse. The hen harrier is a generalist predator, and is known to feed on red grouse adults and chicks. Recent research in Dumfriesshire and elsewhere has shown that when high breeding densities of harriers coincide with low densities of red grouse, it can prevent red grouse recovery and suppress the number of grouse available for shooting in autumn. As a result, hen harriers breeding on heather moorland managed for red grouse have often been targeted by game managers, and illegally killed and their nests destroyed. Leslie Brown in his account of British Birds of Prey (1976) suggested hen harriers would increase to over 1,000 pairs if illegal persecution by gamekeepers on grouse moors ended. Research undertaken 20 years on confirmed Brown's fears, suggesting illegal persecution was limiting the numbers and range of hen harriers in parts of Scotland and the UK in general.

Today, some of the symptoms of persecution are still evident, with the hen harrier remaining a pathetically scarce breeding species in England and artificially low in south and east Scotland, areas that are dominated by management for driven grouse shooting. Whilst there is general agreement between conservation and game management interests on the nature of the conflict, there is divergence on its resolution. Thankfully, the conflict between harrier conservation and grouse management presents less of a dilemma for conservation agencies on Welsh hills than on the grouse moors across Offa's Dyke. However, although the incidence of persecution of harriers in Wales is relatively low, there is no room for complacency. In 2004, one Welsh harrier nest showed the symptoms of persecution. There is little evidence that hen harriers are responsible for suppressing the populations of ground-nesting birds in Wales or elsewhere, so I hope that populations of all native birds of prey continue to recover to levels dictated by sustainable habitat management, in a mosaic of land uses.

***PATRICK LINDLEY** is RSPB Cymru's Uplands and Species Officer*

Byd y boda tinwyn

Un o helwyr mwyaf gosgeiddig rhostiroedd Cymru yw'r boda tinwyn. Aderyn sydd wedi ei addasu i hedfan yn araf ac am gyfnodau hir dros diroedd agored, yn chwilio am brae mewn llystyfiant tal. Eistedd a gwylio am amser maith yw'r ffordd orau i ddysgu amdano. Fe'i gwelir yn aml yn igam-ogamu yn isel, gan chwarteru'r rhostir islaw, ond gall hela mewn ffyrdd eraill - fel gwalch glas, er enghraifft, yn gwibio dros wal garreg i gipio adar bach yr ochr draw.

Mae perthynas agos rhwng dwysedd corhedyddion y waun a llygod pengrwn y gwair, dwysedd bodaod tinwyn a hefyd canran y grug a'r glaswellt ar ddarn o rostir. Ar gychwyn y tymor magu bydd y ceiliog yn arddangos drwy daflu ei hun yn bendramwnwgl o uchder mawr gan droelli'n wyllt a galw'n gecrus. Arwydd sicrach o bresenoldeb nyth yw gweld ceiliog yn trosglwyddo bwyd, ar adain, o'i droed yntau i grafanc yr iâr.

Oherwydd erledigaeth a newidiadau mewn defnydd tir roedd y boda tinwyn wedi gorffen bridio yn rheolaidd yng Nghymru erbyn 1910. Er

sefydlogi a chynyddu rhywfaint, mae'r boblogaeth yn isel o hyd - 43 pâr a gofnodwyd yn 2004. Oherwydd y gwrthdaro rhwng gwarchod bodaod tinwyn a magu grugieir, mae'n debyg bod erledigaeth anghyfreithlon yn cyfyngu ar niferoedd a dosbarthiad yr aderyn mewn rhai rhannau o'r DU. Cydnabyddir bod bodaod tinwyn yn hela grugieir ond nid oes cytundeb ar hyn o bryd ynglŷn â'r ffordd orau i ddatrys y gwrthdaro.

Seeking six **scarce moths**

We can all help record butterflies, but even common moths are too difficult for the non-specialist, you might think. But a project to find out more about six of Wales' rarest moths is proving that volunteers can help with even the most challenging searches, as KELLY THOMAS reports.

Narrow-bordered bee hawk-moth

Compared to their conspicuous cousins the butterflies, moths are often elusive, flying at night and hiding in dense vegetation during the day. The growing band of moth enthusiasts relies heavily on the use of light-traps, which attract moths so that they can be identified, recorded and released unharmed. But there are other ways of finding out about moths, including some of the priority moths in Wales.

Butterfly Conservation Wales is running a project called Action for Threatened Lepidoptera. The project is working on six priority moths whose adults or larvae (caterpillars) can be found during the day without the need for night forays with light traps, generators or torches!

Argent & sable

Argent & sable *Rheumaptera hastata*

The beautiful and distinctive argent and sable flies on warm sunny days between May and early July. There are two races of this moth. The smaller race, *nigrescens*, is a moorland species whose caterpillars feed on bog myrtle, whilst the slightly larger race, *hastata*, has blacker markings and feeds on the leaves of small birch trees. The argent & sable is not faring well in Wales, as our latest surveys have recorded only single moths in Monmouthshire and Brecknockshire. However, it is consistently reported at Fenn's and Whixhall Mosses on the Wrexham/Shropshire border, and there was a new sighting at Cors Goch Fochno, Ceredigion, in 2005. Despite these scattered records, the status of the moth is unclear and further surveys are essential.

Welsh clearwing *Synanthedon scoliaeformis*

The Welsh clearwing has a restricted British distribution in Wales and Scotland. It was first discovered near Llangollen, Denbighshire, in 1854. Following an absence of over 100 years it was rediscovered in Merionethshire in 1988. During 2002 a survey was conducted in parts of Caernarfonshire, Denbighshire, Merionethshire and Montgomeryshire and many new colonies were found. There are a couple of possible old records for Welsh clearwing in Glamorgan and so surveys have now been extended into Glamorgan, Carmarthenshire and the Brecon Beacons National Park.

Welsh clearwing
Janet Graham

It is an elusive day-flying moth, which mimics a wasp in its appearance. The females lay their eggs into crevices in the bark of mature birch trees. The caterpillar then feeds within the bark for two to three years before pupating and later emerging as an adult moth, leaving behind a characteristic 5mm diameter circular hole. A pheromone lure is available, which imitates the scent of the female and attracts male Welsh clearwings to investigate. This offers an interesting technique for those with patience (as it involves waiting and watching to see if any clearwings are attracted to the pheromone lure). Possibly the most effective method is to search for suitable looking birch trees, then look for holes, and if the site looks promising, go back between June and early/mid July and test out the pheromone.

Drab looper *Minoa murinata*

This is a distinctive moth as it has no distinctive markings! It is small and plain, with light to dark muddy-brown wings. The males fly by day, particularly during sunny weather, during May and June (near wood spurge, which the larvae feed on) and there can be a partial second generation in August. Project surveys have found the drab looper at a handful of woodlands in the Wye valley in Monmouthshire. These sites all have stands of wood spurge along the rides or in areas which have been disturbed following clearance.

Drab looper
Dave Green

Buttoned snout *Hypena rostralis*

This is one of our longest-lived British moths and the adults can be found in almost any month of the year, in the country or in the city, wherever hop is abundant. The buttoned snout overwinters in outbuildings and caves and like many other moths it has even been known to put in an appearance at campsite toilets! The adult moth is poorly attracted to mercury vapour light-traps, so moth trapping is not a reliable survey method. The larvae, on the other hand, are readily beaten from the hop on which they feed. This involves placing a sheet under the hop and firmly tapping the plant with a stick and seeing what falls out. The larvae will feed on both wild hop and the garden variety, golden hop. These larval searches have resulted in new records for Monmouthshire, Brecknockshire and Glamorgan. The key to finding buttoned snout larvae lies in knowing where hops grow, and so we would welcome any information on this plant's Welsh distribution.

Narrow-bordered bee hawk-moth *Hemaris tityus*

This charismatic moth is one of my favourites. It is a bee mimic which flies during the day from mid-May to late June or early July. The adult is a powerful flier, covering large areas at speed, but hovering at flowers such as lousewort, bugle, bird's-foot trefoil and exotics such as rhododendron and red valerian. The larvae feed on devil's-bit scabious. The eggs are laid singly on the undersides of the leaves and sometimes more than one larva is found per plant, usually under the lower leaves.

Narrow-bordered bee hawk-moth
Michael J Clarke

To determine the distribution of the narrow-bordered bee hawk-moth, in 2003 we developed monitoring techniques and established monitoring at five known sites in Wales. We found few eggs, larvae or adults, so monitoring is likely to be very labour intensive. The report of this work has been distributed and has helped generate interest in the moth, which has expanded our knowledge of its distribution on the Gower; and during 2005 the moth has been recorded at RAF Pembrey, Carmarthenshire, and at Morfa Harlech, Merionethshire.

Recent studies of its larval requirements suggests that the species may prefer slightly shorter swards of vegetation than the marsh fritillary butterfly *Euphydryas aurinia*, with which the moth sometimes occurs, since both feed on devil's-bit scabious.

Alan Barnes

Awydd chwilio am wyfynod prin?

Gall fod yn waith digon trafferthus i ganfod ac adnabod gwyfynod, yn enwedig gan mai yn ystod y nos y bydd cyfran helaeth ohonyn nhw'n hedfan. Ond mae Gwarchod Gloÿnnod Byw Cymru wedi cychwyn prosiect i ddarganfod mwy am chwe gwyfyn pwysig sy'n hawdd i'w darganfod yn ystod y dydd- un ai fel lindys neu oedolion. Mae'r rhywogaethau hyn i gyd yn rhai prin iawn yng Nghymru ac mae gwir angen mwy o waith arolwg er mwyn cael gwell darlun o'u statws a'u hanghenion. Yn eu plith, er enghraifft, y mae'r gliradain Gymreig, gwyfyn sy'n ymdebygu i wenynen ac sy'n dodwy wyau mewn hen goed bedw. Fe'i cofnodwyd ym Meirionnydd nôl ym 1998 - y cofnod cyntaf ers canrif a mwy. Canfuwyd poblogaethau eraill yn 2002 ac oherwydd bodolaeth hen gofnodion o Forgannwg mae'r gwaith arolwg nawr yn ymestyn i'r sir honno ac i sir Gaerfyrddin a Pharc Cenedlaethol y Bannau. Mae'r prosiect yn rhoi cyfle i wirfoddolwyr rannu yn y gwaith cynhyrfus hwn.

Waved carpet *Hydrelia sylvata*

Records for waved carpet in recent years have mostly come from woodlands in south Wales. During 2003 and 2004 there have been reports of waved carpet in Pembrokeshire, Merionethshire and Montgomeryshire. It has now been recorded from all the Welsh Vice-counties except Flintshire and Anglesey, but there are no post-1980 records from Brecknockshire, Radnorshire, Caernarfonshire or Denbighshire. A survey of Brechfa Forest, Carmarthenshire, found 48 adults, and 45 were recorded at Park Mill Wood on the Gower. Many other sites in Wales have proved suitable for the moth. Searches have been carried out for the elusive larvae at these sites but, unfortunately, none has been found, so we still don't know what the larvae are feeding on in Wales. In England they have been reported feeding on alder, birch, willow and sweet chestnut.

Jon Baker

***Kelly Thomas** has worked on the Action for Threatened Lepidoptera project as part of her work for Butterfly Conservation Wales for the past two years. From September she will be working as Moth Conservation Officer at Butterfly Conservations' Head Office in Dorset.*

Reference

Waring, P., Townsend, M. & Lewington, R., 2003. *Field Guide to the Moths of Great Britain and Ireland.* British Wildlife Publishing.

Butterfly Conservation is grateful for the continuing financial support of the Countryside Council for Wales. In particular we wish to thank Adrian Fowles for his advice and support for the project, and the volunteers and contractors for all their hard work in the field.

Volunteers

Volunteers are crucial to the success of the Action for Threatened Lepidoptera project, by adding to our knowledge of the distribution and ecology of these moths. We organise training events and site visits to give volunteers the skills required to do surveys. We compile all the survey information, even if the target species is not found. Travel expenses are also available to help support volunteers.

A range of bilingual fact-sheets has been produced as well as a number of reports. If you would like further information on any of the species mentioned above, or you would like to help with the project, please do get in touch:

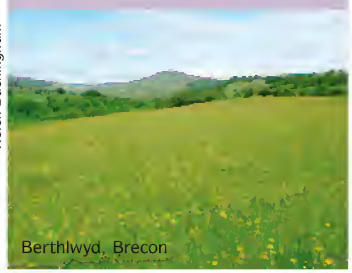
Butterfly Conservation Wales, 10 Calvert Terrace, Swansea SA1 6AR
Tel: 0870 7706153 Email: wales@butterfly-conservation.org

Biodiversity in trust

Joe Cornish - NTPL

Hafod y Llan from Gelliago

With 225 kilometres of coastline, three quarters of the endangered remnant of montane heath, and nearly 50,000 hectares of Welsh countryside in its ownership, no organisation is better placed to do more for the natural environment than the National Trust. In the past, its nature conservation performance has been patchy at best. Now the National Trust in Wales has set out its commitment to nature in the form of a Biodiversity Strategy.* HELEN BUCKINGHAM *describes the National Trust's vision for nature in Wales.



Helen Buckingham

Berthlwyd, Brecon

The conservation of nature has been at the heart of the National Trust's purpose since it was founded in 1895. The protection of the 'natural aspect, features and animal and plant life' was embedded in the Trust's original Articles of Association in 1895 and enshrined in the 1907 National Trust Act.

The National Trust Wales cares for some of the most important natural heritage in the country, from spectacular coastline to lush valleys and wild mountains and moorlands. Much of our land is nationally and internationally important for wildlife with over a third designated as Sites of Special Scientific Interest. A fifth of all NT-owned designated sites are within Wales. Thus Wales is a large jewel in the National Trust's crown.

The Trust's first acquisition of countryside was Dinas Oleu, in Gwynedd, a small but rich site of lowland heath, scrub and grassland above Barmouth. Since then there have been many acquisitions and bequests. This portfolio is now very impressive, with sites in virtually all parts of Wales. It includes Graig Fawr in north-east Wales, the border properties of Powis Castle, Erddig, Chirk and Clytha, the Brecon Beacons and large tracts of Snowdonia. These include the Hafod y Llan estate and the recent bequest of Dyffryn Mymbyr. Its many coastal properties include Llanrhidian Marshes and Whitford Burrows on Gower and the Stackpole Estate in Pembrokeshire.

St David's Head, Pembrokeshire

The loss and degradation of habitats that has occurred across the UK in recent decades has also affected land owned by the Trust. Its management, much of which is held in full agricultural tenancies or as common land, has been driven by the post-war agricultural subsidy system. The changes in the structure of farming, the increased mechanisation and subsidy-driven intensification have been detrimental to extensive farming and the biodiversity it supported.

However, we have long recognised that with our large land ownership, and with the unique status of inalienability that many of our properties enjoy, we are in a strong position to make a great contribution to nature conservation in Wales.

A strategy for biodiversity in Wales

Our recently published strategy *Biodiversity in Trust* outlines some of the ways in which we intend to conserve the wealth of nature in our care, restore degraded habitats and reverse some of the losses. We need to address the issues which we have identified, build on our successes and deliver wider nature conservation benefits if we are to be a leading nature conservation organisation in Wales. In brief these issues include:

- restoring upland habitats, lowland heaths and grasslands, and addressing their isolation and fragmentation;
- restoring the natural hydrology of places like valley bogs, wet pastures and river systems, which will become all the more important in the face of a changing climate;
- tackling groundwater pollution from agricultural fertilisers, pesticides and soil erosion, and preventing any diffuse or point sources of pollution from coastal properties which might harm the marine environment;
- conserving the remaining low-intensity managed farms to ensure that the wildlife-rich fabric of these gems of farmed landscape are maintained and enhanced;
- reversing habitat degradation brought about by inappropriate grazing.

Much can be done at the field level, but if we are to tackle issues such as fragmentation of habitats and hydrological changes we must think and operate at a landscape scale, and work with neighbours and partners. Habitats are subject to external forces beyond our direct control, particularly climate change and seasonal unpredictability, sea level rise and atmospheric pollution. Rare montane heath and relict arctic alpine flora are particularly threatened by climate change and the effects of increased atmospheric pollution. Progress to conserve and restore the remaining fragment of the former threatened habitat has so far been minimal. An altering coastline, squeezing salt marshes and reed beds and eroding soft cliffs, could open up opportunities for new habitat creation inland. Sites such as Stackpole and Llanrhidian marshes in the south, and Dinas Dinlle and Porth Dinllaen in the north, are likely to change profoundly over the next century.

Conservation in action in the uplands

The majestic and spectacular glacial hanging valley of Cwm Idwal in northern Snowdonia was Wales' first National Nature Reserve, designated for its rare arctic-alpine flora (including Snowdon lily and purple saxifrage) and its dramatic glacial features. However, for many years the site suffered from the same high grazing levels as other upland areas in the UK, which has affected the quality and diversity of the habitats, with some of the most important vegetation being confined to the steepest cliffs where grazing animals seldom reach.

Cae Fadog Heath above Barmouth

NTPL

In 1998 the removal of sheep grazing from Cwm Idwal presented a wonderful opportunity to protect rare plant communities and to enable a natural vegetation succession to develop from the base to the summit of a mountain. The long-term vision is to allow the development of a more natural vegetation cover: cliff-bound arctic-alpine plant communities will spread, suppressed heaths will expand and flourish and natural scrub will return. The project has also been an inspiration for conservation initiatives on other sites and has highlighted the need for large-scale, long-term conservation management in the Welsh uplands.

Hafod y Llan was acquired by the NT in 1998, with substantial public support and financial donations. Covering some 1559 ha, it extends from the rich oak and ash woodland in the valley, through upland heath, grassland and rock habitats to the summit of Snowdon. Under our management sheep numbers have been greatly reduced, Welsh black cattle have been reintroduced and the farm has become organic.

The long-term vision is to restore this important upland farm, extending the woodland uphill to form a natural tree-line, and expanding the area of heath dominated by heathers and bilberry, so that the visitor to Cwm Llan in late summer will be able to marvel at

the amphitheatre of purple and dark pink, a profusion of flowering heathers. The rare juniper heath, which clings to the upper slopes of Lliwedd, will extend to other areas.

Wethers (castrated male sheep) may be reintroduced to help tackle the dense mat grass and to help keep out trespassing sheep from adjacent hefts. Welsh black cattle will graze here in the summer, helping to check the areas of bracken, creating and maintaining the diverse structure of the wet heaths and mires and providing open ground for the regeneration of scrub locally. Feral goats will continue to graze here, a strong reminder of the history and nature of farming in the area.

The evidence of past land-use and historical events (such as those associated with Gladstone rock) will not be submerged by the restoration of the vegetation, but enhanced by its enriched setting.

Farms

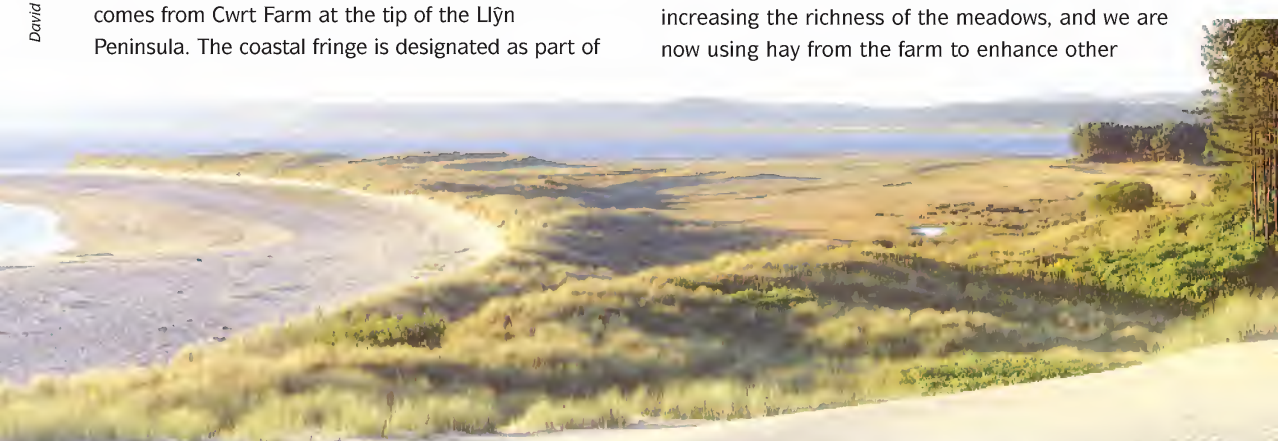
Much of NT land in Wales is farmed and nearly all our 200 farms in Wales are tenanted. This often means that we can only achieve nature conservation benefits through negotiating with and supporting our tenants. The key mechanism is through Whole Farm Plans. These plans help to establish an agreed direction for existing let land and allow a fundamental assessment of land-use options to be carried out for vacant land.

An example of how these plans work in practice comes from Cwrt Farm at the tip of the Llŷn Peninsula. The coastal fringe is designated as part of the Pen Llŷn/Llŷn Peninsula and Sarnau SAC and the Aberdaron coast SSSI. Important habitats on the farm include scrub and heath of the coastal slopes, sea cliffs, cloddiau and ponds. The valley of Porth Meudwy is particularly important for overwintering and migrating birds, providing both shelter and food. Under the plan the farm has entered a new Tir Gofal agreement. Cattle grazing has been restored to the coastal slopes, hedges repaired, semi-improved grassland reverted and wetland areas managed positively. Issues of cattle wintering were addressed by the plan and an arable rotation developed to provide both income and a valuable food source for birds.

Gwaenothle farm sits at the southern end of the Dolaucothi estate, in Gwynedd, which consists of nine farms in the Cothi valley, renowned for its gold mines which date from Roman times. In contrast to the surrounding farms, Gwaenothle survived the onslaught of productive farming. Its previous tenant was elderly and little interested in full scale revamping of his fields. As a result the NT now owns a real gem of a farm with its mix of old hedgerows, flower-rich fields, rough pastures and wet woodland. On a hot summer's day many of the meadows rattle with the sound of ripening hay rattle and locally the rhos pastures are a sea of the delicate heads of whorled caraway.

The warden works very closely with the new tenant, who has decided to farm organically and has entered all of the land into Tir Gofal. Together we are increasing the richness of the meadows, and we are now using hay from the farm to enhance other

David Noton



Whitford Burrows, Gower

meadows that we own in Carmarthenshire.

A small number of our farms are managed in-hand. Muriau near Abersoch has been run with the Hafod y Llan estate and the benefits of our management here are very much in evidence. With the support of the RSPB and CCW, cloddiau (banks) have been rebuilt and the rank and scrubby coastal slopes are being grazed by ponies. Chough feed throughout the farm. Organically managed arable crops are providing both a plethora of arable weeds not seen here for many years and a rich source of food for birds such as linnets and yellowhammers. Four of the species-poor fields are being managed as traditional hay meadows and we are looking at ways of enhancing these by feeding hay from a wonderful Plantlife owned meadow on the edge of the Llŷn Peninsula.

Lowland heaths and commons

In the lowlands we have had some major successes, being at the forefront of positive management of our commons. For example, the Gower Commons Initiative is a partnership project funded by the Heritage Lottery Fund for the conservation of lowland heath. The project covers an area of 50 square kilometres, including coastal cliffs and slopes, inland wet heaths and mires, dry heaths, wet woodland, acid grassland calcareous grassland and ponds.

The Gower Commoners Association delivers site works on behalf of the project, bringing common land under positive management, controlling bracken, clearing rhododendron and birch scrub, creating firebreaks and enabling previously unrecorded archaeological features to be identified, from Iron Age hut platforms to Medieval longhouses. The Partnership has been working to reduce the number of grazing animals killed or injured on roads running through common land, and reduce the number of heathland fires.

We are also committed to working at a landscape scale. The Pembrokeshire's Living Heathland Project has successfully reintroduced positive management to more than 1000 ha of coastal and lowland heathland (see Natur Cymru, 6: 15-19). Boundary fences and cattle grids have been installed, firebreaks and blocks of overgrown heath have been cut, scrub cleared and Japanese knotweed controlled. As a result of these efforts, levels of grazing by cattle and horses has tripled and the cattle grazing by local farms has undergone a fivefold increase since the project started. Uncommon plants such as the pale dog violet and yellow centaury have returned to several sites, whilst heathers are regenerating elsewhere.

Learning lessons

Not all the land in our care has been managed well from a wildlife perspective and, as we own 13% of all common land in Wales both in the uplands and the lowlands, this is a special challenge. Many of the upland commons, such as those of the Abergwesyn, Carneddau and the Berwyns, are heavily stocked and overgrazed.

Cam strategol ymlaen i'r Ymddiriedolaeth Genedlaethol yng Nghymru

Gyda chymaint o gefn gwlad ac arfordir Cymru yn ei meddiant mae'r Ymddiriedolaeth Genedlaethol mewn sefyllfa gref i weithredu er lles amgylchedd Cymru. I helpu'r mudiad gyda'r gwaith hwn paratowyd Strategaeth Bioamrywiaeth yn ddiweddar ar gyfer yr Ymddiriedolaeth yng Nghymru. Er bod llwyddiannau'r Ymddiriedolaeth yn niferus ar hyd y wlad – gan gynnwys mentrau i reoli gweundiroedd ar benrhyn Gŵyr a Sir Benfro, mabwysiadu Cynlluniau Fferm Cyfan ar gyfer daliadau dan denantiaeth ac adfer cymunedau ucheldir yng Nghwm Idwal ac ar ystâd Hafod y Llan, mae angen gwella rheolaeth nifer o safleoedd eraill. Lefelau amhriodol o bori sydd yn aml yn peri problem – yn rhy drwm mewn mannau, yn rhy ysgafn mewn lleoedd eraill. Un her fawr ar hyn o bryd yw'r angen i ddarganfod ffyrdd i hybu lledaeniad cynefinoedd gwyllt o'r glannau i mewn i'r tir.

Helen Buckingham *has been the Nature Conservation Adviser for the National Trust Wales since March 2003, before which she spent more than ten years as Ecologist for the Peak District National Park.*

Copies of the National Trust Wales' Biodiversity Strategy are available from the NT office in Llandudno.

The CAP-driven subsidy system provided the incentive for commoners to keep large numbers of sheep. In general this has been accompanied by the replacement of rich mosaics of heath, scrub and grasslands with species-poor acid grasslands and bracken.

In contrast, in some lowland and coastal areas such as on the Ceredigion coastal properties, the problems are often those of undergrazing, abandonment or of inappropriate stock. At Cwm Soden we have struggled to implement the required management of scrub and bracken. This has been at the expense of the future of the last remaining population of pearl-bordered fritillary butterflies in west Wales.

Some of our sites, such as Graig Fawr, have not been managed as positively as they might have been. Isolated from our main properties, this wonderful site has created challenges for us. Designated as SSSI for its outstanding flora, this limestone reef knoll, one of only a handful across north Wales, supports stunning rarities such as spotted rockrose and spiked speedwell. In the past the accessible areas of the site have suffered from too many sheep. As a result the intimate mix of lime-loving and neutral grasslands has in part been replaced by species-poor grasslands where the sheep concentrate, while other parts of the site have become enveloped in scrub, shading out the rich diversity of plants. We continue to struggle at this difficult site to implement the ideal management.

Grappling with difficult and sometimes conflicting issues is not new to the Trust. Dedicated local staff have been working hard to address issues such as the undergrazing of lowland commons, the inappropriate grazing of parklands, the intensive nature of some of our coastal farms and the lack of grazing of coastal slopes. We are looking for ways of unlocking nature along the coastal fringe, for example by allowing habitats to spill over into the coastal hinterland, and wildlife to flourish from seashore to mountain. Biodiversity in Trust gives this work a boost, building on what the Trust is already doing to ensure that we will increasingly be a force for good for biodiversty in Wales.

The future

We now have a vision for nature on our land, one which we believe will strike a chord with millions of existing and potential members. Translating this vision into something tangible will take resources and commitment. In the process, as our Biodiversity Strategy puts it, "we will seek opportunities for our wildlife to be a source of inspiration, enjoyment and learning for visitors, volunteers, enthusiasts and scholars. We will seek to improve our contribution to nature conservation by constantly learning from what we do and sharing knowledge and experience with others."

Rhwng y Rhaeadr Fawr a'r Dalar Hir

Blas ar ardal Abergwyngregyn trwy ei henwau lleoedd

Pobl yr oesoedd a fu a greodd cefn gwlad. Ac mae'r bobl hynny yn siarad â ni heddiw am eu cynefin, trwy gyfrwng yr enwau a roesant ar eu bro. Fel rhan o astudiaeth o'r tirlun hanesyddol yn nyffryn Abergwyngregyn gan Bartneriaeth Treftadaeth Dyffryn Aber, casglwyd cronfa o enwau lleoedd y plwyf hwnnw.

Fel ym mhob ardal cawn yma enwau lleoedd disgrifiadol iawn, llawer nad ydynt bellach ar gof nac yn cael eu harfer. Maent yn cyfeirio at lysiau a choed, anifeiliaid, ffurfiau tir, cynefinoedd ac arferion gwledig. Mae pob un o'r enwau mewn llythrennau italic yma (oni ddywedir yn wahanol) yn enwau o blwyf Abergwyngregyn a'r cyffiniau agos. Daeth yr enwau o bob math o ffynonellau, gan gynnwys hen ddogfennau, cyfrifon swyddogol, hanes llafar, ac yn bennaf, casgliad enfawr Melville Richards (MR) ym Mhrifysgol Bangor, ac sydd bellach ar gael ar y we (www.bangor.ac.uk/amr). Rhaid gochel rhag cymryd camau gweigion wrth ddehongli enwau lleoedd. Mae ffurf enwau yn newid dros y canrifoedd - newidiodd Nant Mawan, fel oedd hi ym 1332, i fod yn Anafon erbyn heddiw. Roedd dau ystyr i 'nant' ar un adeg, sef cwm (os yn ei ffurf wrywaidd), ac afonig (os yn ei ffurf fenywaidd).

Moelydd, nentydd a llethrau

Mae dyffryn Aber yn ardal rhwng traeth a mynydd – rhwng *Traeth Lafan* a moelydd y *Carneddau*. Oddi fry cawn *Moel Wnion*, *y Foel Ganol*, *y Foel Dduarth a'r Foel Fras*, *Drosgl*, *Y Drum*, *Llwydmor* a'r *Bera Mawr*. Rhywbeth ar ffurf côn neu byramid yw bera. Ond beth yw ystyr *Y Drosgl*?

Does dim gwadu bod diddordeb brwd yma yng Nghymru yn y berthynas rhwng dyn a'r tirlun ac mae mentrau fel Llên y Llysiau, Bwrlwm Eryri (menter tirlun diwylliannol bro Eryri) ac Ogam (menter debyg yn Sir Benfro) yn rhoi cyfleoedd i bobl ymhél â'r maes. DUNCAN BROWN sy'n bwrw golwg dros waith a wnaed yn ddiweddar yn nyffryn Abergwyngregyn, ger Bangor, sef gwaith sydd wedi cyfoethogi dealltwriaeth o'r fro a'i phobl trwy gyfrwng yr enwau a roddwyd ar wahanol nodweddion y dyffryn dros y canrifoedd.

Rhaeadr Aber

Ym mha ystyr tybed yr oedd *Llwydmor* yn llwyd ac yn fawr? Ac ers pryd y bu *Moel Wnion* yn foel?

Cofnododd Thomas Pennant Moel Wnion fel *Moelwynnion* ym 1810 a dyma sut y mae rhai trigolion yn ei ynganu heddiw. Pryd ys gwn i oedd moelydd Cymru yn goediog? Cyn eu henwi yn "foelydd" dybiwn i, er mai copa o ryw fath, boed fynydd neu dalp o fenyn, coelier neu beidio, oedd y 'moel' hwn yng nghyfreithiau Hywel Dda. Mae'n berthnasol nodi fod *Moel Geidio* yng Ngheredigion wedi ei chofnodi gyntaf ym 1184 er i gyfran sylweddol o'r "moelydd" niferus yng Nghymru gael eu cofnodi gyntaf mewn print tua throad yr 16eg Ganrif. Ond cofier bod y diddordeb mewn enwau nodweddion yr ucheldir wedi datblgyu'n llawer hwyrach na'r rhai ar y tir is ac i'r cofnodion felly ymddangos ymhell ar ôl iddynt gael eu henwau ar lafar.

Mae'n werth oedi ymhellach ar *Drosgl*. O "trwsgl" mae'n debyg y daeth hwn, yn ei hen ystyr o "garw" neu "flêr". Gallai fod hefyd yn lle brith smotiog, fel mynwes bronfraith - neu dresglen. Y tu ôl i ddyffryn Aber, cwyd *Eryri* yn gefnlen ddramatig, ond nid ardal yr eryrod mo hon. Yn hytrach, ardal wedi ei chodi uwchlaw'r tir o'i chwmpas, fel y mae croen y sawl sydd yn dioddef o'r eryr - *shingles*!

Cysylltir yr ucheldir a'r traeth gan linyn arian o afon. Uwchlaw'r *Rhaeadr Fawr* yr Afon Goch yw hi, ond odditani *Afon Rhaeadr Fawr*. Yn ymuno â hi ychydig uwchlaw'r pentref mae *Afon Anafon*. Gwelais yr afonydd hyn yn llifo ar ôl glaw mawr, weithiau'n goch o fawn, ac weithiau yn llwyd gyda'r clai a gododd o waddodion rhewlifol *Y Waun*. Mae sawl ystyr i'r gair "gwaun" ond nid yw'r llecyn yma yn ymdebygu llawer i'r un ohonynt heddiw; beth newidiodd tybed - natur y tir ynteu ystyr y gair? Torrodd yr afon ei chwrs byrlymus trwy'r *Diffwys* cyn mynd ar ei hynt i'r môr. Lle serth, neu ddwnsiwn o geunant yn yr achos hwn, yw "diffwys".

Mae serthrwydd y fro hon yn amlwg mewn nifer o'i henwau. Dyna darddiad enw'r tŷ hynafol *Gorddinog* - ystyr "gorddin" oedd rhuthr o ddŵr. Gallasai 'garth' yn *Abergarthcelyn* olygu llechwedd yn gyforiog o goed celyn (neu rywbeth gwahanol iawn i hynny os darllenwch ymlaen). A pha ryfedd mai enw Llywelyn Fawr a'i gyfoeswyr ar y fro llechweddog rhwng yr Ogwen a'r Gonwy oedd *Arllechwedd*.

Cawn ein hatgoffa o lethrau o bob math megis *Y Cras, Allt y Bont, Breichiau, Garthcelyn* a *Than y Clogwyn*. Cafodd *Y Cras* ei gofnodi gyntaf ym 1332. Lle sych ac anhydrin mae'n debyg ydoedd. Ac wrth i'r llethrau ildio i'r blaendir arfordirol i'r gogledd cawn y Dalar Hir (ac efallai mai yma oedd yr Hirdir Coch hefyd). "Talar" oedd y llain ar hyd ymyl cae na fyddai'n cael ei haredig gan mai man troi ydoedd i'r ceffyl a'r ychen ers llawer dydd.

Nodweddir yr ardal hefyd gan fân ddyffrynnoedd neu afonydd eraill, megis *Nant y Glyn*, *Nant y Rhaeadr* a *Nant Mawan*. *Nantedracadat* oedd un hen sillafiad o'r ail mewn hen ddogfennau - adlais mae'n debyg o'r hen air Saesneg am raeadr, sef cataract.

Coed gwern a llwyni eithin - a mafon efallai

Petai hi ond am dystiolaeth enwau lleoedd yn unig, beth fyddai'r botanegydd yn ei ddirnad o lystyfiant dyffryn Aber? Dim llawer efallai, ond o leiaf cawn *Tanderwen*, *Gwerglodd yr Elestr* (iris melyn), *Cae*

Bedw a *Parc yr Eithin*. Dyddia'r olaf o 1640 pan roedd "parc" mor gyffredin â "cae" i ddisgrifio llain gaeedig o dir. Mae'r enw hwn yn awgrymu defnydd o eithin fel cnwd, sy'n codi'r cwestiwn: pryd y cychwynnodd yr arfer o blannu a medi eithin fel porthiant i anifeiliaid yng Nghymru?

Nid yw dyffryn Aber yn brin o enwau yn cyfeirio at goed gwern. Mae'r *Wern Goch* a'r *Wern Fudr* yn goedwigoedd gwern o hyd, ac yn dal i ddangos ôl gwaith bondocio ddechrau'r ganrif ddiwethaf. Achubais yr enw *Wern Fudr* o gof Mr Stanley Jones ychydig cyn iddo farw, a dyna'r enw a roddwyd ar y goedlan hon byth ers hynny gan y Cyngor Cefn Gwlad yng ngwarchodfa Coedydd Aber. Cafodd y ddwy goedwig gwern yma eu bondocio ar gyfer gwneud gwadnau clocsiau tua 1910. Ceir hefyd *Gwern Engan*, *Gwern y Pandy*, a *Gwern Toppoge*.

Mae sawl cyfeiriad at gelyn ac at fafon. Nôl yn y 6ed ganrif, sonnir bod dau berson, gyda chysylltiad â'r dyffryn, wedi cael eu galw yn 'Celyn' a 'Mawan'. Hen enw pentref Abergwyngregyn oedd *Aber Garth Celyn* a chawn *Buarth Merched Mafon* yn nyffryn Anafon. O holi'r hanesydd, person oedd Celyn, ond o holi'r efrydydd enwau, na, Cuhelyn fyddai hwnnw yn y cyfnod cynnar dan sylw, ac at y goeden y mae'r enw'n cyfeirio. Mae llwyni mafon yn tyfu yma'n lled gyffredin heddiw o gwmpas *Y Bontnewydd*.

Cocos, ceirw a chwningod

Cyfeirio at ddiwydiant cocos *Traeth Lafan* oedd yr enw *Abergwyngregyn*. Gerllaw roedd *Bryngwylan* a chofnodwyd hwnnw yn gyntaf ym 1775. Adfail neu waeth ydyw erbyn hyn. Cefais 10 enw o gasgliad Melville Richards yn cynnwys ffurf ar y gair "gwylan". Gwn am eraill, i gyd o Siroedd Caernarfon, Môn neu Ddinbych, nid o angenrheidrwydd wedi eu lleoli ger y môr. A oedd gwylanod mor gyffredin ddwy ganrif yn ôl â heddiw, a pha fathau o wylanod oeddynt tybed?

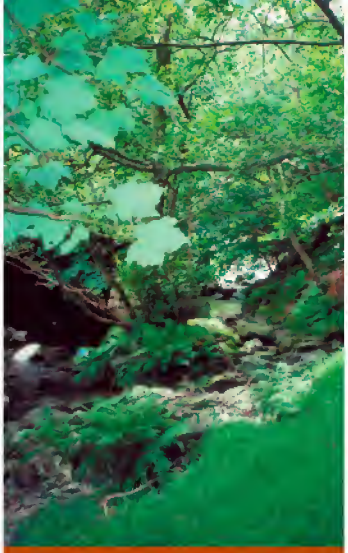
Ymddengys un enw dirgel iawn yn y gronfa. Hwn yw *Llanerchyn* neu *Llaniyrchyn* o gyffiniau Llanllechid. Gan mai eglwys sydd yma, pur annhebyg mai fel "llannerch bach" y dylid dehongli hwn, ond fel eglwys wedi ei chysegru i sant o'r enw Erchyn neu Yrchyn. Dehongliad arall - rhamant naturiaethwr efallai - fyddai "llan yr iwrch bach", math o garw a ddiflannodd o Gymru ac sydd yn raddol dychwelyd.

Cawn y cyfeiriad cyntaf at *Cwninger* Aber ym 1750 lle cedwid magwrfa gwningod yng nghyffiniau Maes y Gaer. Fel *Y Warren* y mae'r cof amdano heddiw. Cyfeiriadau at anifeiliaid dof yw gweddill yr enwau anifeilaidd. Cofnodwyd *Dryll yr Hwch* ym 1617, un o bedwar enw o'r union fath dros Gymru yng nghasgliad MR. Llain neu fesur o dir oedd "dryll" yng Ngogledd Cymru yn y Canol Oesoedd.

Yn ogystal â chael y cyfle i ddefnyddio cronfa enwau MR, cefais hefyd y fraint o glywed a chofnodi enwau lleol ar nodweddion rhy fach a disylw i ymddangos ar unrhyw fap, ond rhai sydd serch hynny wedi goroesi tan yn ddiweddar ar lafar. Mae dau o'r rhain yn tystio i bwysigrwydd magu gwartheg yn yr oes a fu, sef *Brouau Llouau* rhwng *Nant y Rhaeadr* a'r rhaeadr fawr, a *Ffoes Llo*, sef hafn serth sy'n rhedeg gyfochrog â'r rhaeadr ac yn fwgan parhaus wrth hel y defaid o'r mynydd.

Ffriddoedd, gwigoedd a mawnogydd

Mae rhai enwau yn cyfeirio at wahanol gynefinoedd y plwyf. Cofnodwyd *Vownog* ym 1617. Mae mawnog yn awgrymu'r arfer o ladd mawn a gyfer tanwydd, arferiad a gychwynnodd, mae'n debyg, pan gliriwyd llawer o'r coetir nôl yn y gorffennol pell. Cofnodwyd



Place names of the Aber valley

What's in a name? The Aber valley, near Bangor in north Wales, has been the subject of a historic landscape study by the Aber Valley Heritage Partnership, and reveals many clues to its past through its place names. Some refer to the shape of the hills, like *moel* (bare slope), or the trees that grow there – *Abergarthcelyn*, a slope abundant in holly trees. *Eryri* (Snowdonia), often thought to refer to eagles, might mean an area raised from its surroundings, rather like your skin if you suffer from *yr eryr* – shingles! The Middle English word 'frith', meaning wooded land, became the Welsh *ffridd*, rough mountain pasture. Other place names mention raspberries (*mafon*), alder (*wern*) and gulls (*gwylan*). The word *nant* appears often, both in its masculine form (valley) and feminine form (rivulet). Great care is needed in the interpretation of these names, but their rich meaning and simple poetry amply repays the efforts made to do so.

Y Wig, sef coedwig, am y tro cyntaf ym 1352, fel enw ar blasdy bychan yng nghanol tiroedd breision *Y Dalar Hir*.

Lleolir Aber ar y ffin rhwng y sillafiad Cymraeg gorllewinol ffridd a'r ffurf wreiddiol Saesneg *ffrith*, sydd yn ymddangos i'r dwyrain. Gair o'r Saesneg Canol (cf. Chapel ên le Frith) yw hwn, a olygai'n wreiddiol math o dir coediog, cyn iddo ddwyn ei ystyr Cymraeg diweddarach o borfa arw fynyddig. Yma yn Aber cawn yr amrywiaeth ddiddorol *Tyn y Ffrith*, *Ffridd Newydd* a *Ffridd Gwilym Ddu*. Mor lluosog yng Nghymru yw'r enw *Ffridd Newydd*, yn ôl Tomos Roberts, nes y gellir tybio mai tiroedd wedi eu hadfeddiannu o'r mynydd ydynt mewn cyfnod arbennig. Cafodd y mwyafrif o'r rhain eu cofnodi gyntaf yn y 17eg ganrif. Fe'm temptir i gysylltu'r *Ffridd Gwilym Ddu* â chriad godinebus Siwan, gwraig Llywelyn ap Gruffydd, tuag at Gwilym de Breos, uchelwr o Bowys. Mae'r ansoddair "du" yn ymddangos yn bur aml yn enwau Aber.

....a ffordd o fyw

Tyfu gwair a wnaed yn *Gweirglodd y Wern*, ac fe gedwid y gwair hwnnw efallai yn *Y Sgubor Goch* a safai yng nghysgod y rhaeadr enwog. Anheddle canoloesol oedd yr adeilad hwn yn wreiddiol. Torri coed gwern i wneud gwadnau clocsiau a wnaed yn *Y Wern Goch*, rhyg oedd y cnwd yn y *Cae Rhyg*, ac mae *Ty'n yr Odyn* yn tystio i'r arfer o losgi calch. Roedd *Melin Uchaf* yn syndod o uchel ar hen lôn fynydd dyffryn Anafon. A oedd hon ar un adeg yn ffatri wlân yn gysylltiedig â *Gwern y Pandy* cyfagos? Y cof am gymeriad o'r enw Dic Sgwd yw'r unig atgof bellach, ar lafar, am yr Ysgwd, sef "mill jet" Melin Aber efallai. Ystyr arall yr enw hwn oedd 'rhaeadr' mewn rhai ardaloedd, os nad yma. Heddiw *Y Rhaeadr Fawr* yw enw syml ac urddasol prif nodwedd y dyffryn, y goron ar y fro hon rhwng y môr a'r mynydd.

Diolchiadau

I Tomos Roberts am geisio fy nghadw ar y llwybr cul mewn maes lle mae bwgan yn llechu y tu ôl i bob coeden! I nifer o drigolion pentref Abergwyngregyn am rannu eu gwybodaeth a'u brwdfrydedd am eu bro. Diolch am bob gwybodaeth, ond eiddo i mi yn unig yw unrhyw gamgymeriad neu gamddehongliad.

*Mae **DUNCAN BROWN** yn Uwch Warden Gwarchodfa gyda Chyngor Cefn Gwlad Cymru ac yn ymddiddori yn fawr yn y tirlun diwylliannol a'i esblygiad.*

Cyfeiriadau

Geiriadur Prifysgol Cymru, Gwasg Prifysgol Cymru
Williams, I. (1945). *Enwau Lleoedd,* Gwasg y Brython, Lerpwl

Trevor Dines

Welsh arable weeds

With its over-abundance of sheep and cattle and acres of grazing pastures, you don't usually associate Wales with an arable flora, and yet not long ago large areas were cultivated. Indeed, Anglesey was famously known as the breadbasket of Wales and, although now much reduced, some areas are still rich hunting grounds for specialist cornfield flowers.

The Welsh arable flora is interesting in several respects. Many species that are widespread (and even frequent) in eastern Britain just reach their western-most limits in Wales and are extremely rare here. Prickly poppy *Papaver argemone*, round-leaved fluellen *Kickxia spuria* and corn buttercup *Ranunculus arvensis* are examples. This latter species, although always rare and restricted to the Welsh borders, is now only known from a single field on a Tir Gofal farm in the Vale of Glamorgan. Shepherd's needle *Scandix pecten-veneris* is another of these edge-of-range species. Historically, it has been recorded from 26 sites scattered across Wales, but especially across the north Wales limestone. It is now known only from three sites – two on farms in the Vale of Glamorgan and one from a domestic flower garden on the Mumbles (Swansea). This garden site is especially interesting. It grows in a cultivated border on a housing estate and the owners ensure that plants set seed each year. The estate lies on the site of an old farm from which *Scandix* was recorded over 40 years ago. However, making a direct connection between the old and new records is difficult because *Scandix* (unlike many arable species) has very short-lived seed. Its origin in Mumbles remains a mystery.

Another interesting aspect of Welsh arables is the communities they form. The famous arable, chalk floras of south and east Britain are absent. Instead, assemblages of species more characteristic of poor, well-drained, acidic soils occur. In Pembrokeshire and Cardiganshire you can still find fields with a plethora of such species, their presence perhaps initially indicated by a splash of bright yellow corn marigold *Chrysanthemum segetum*. This sometimes becomes a real pest, growing up above the crop and then collapsing before harvest, seriously reducing yields. Usually, however, like so many of our arable species, it is confined to field corners and gateways, brightening them up on dull Welsh summer days. If you look more closely, you may find weasel's-snout *Misopates orontium*, with its curious flagon-shaped seed pods which bear, just beneath their curved 'nose', two 'nostrils' for the seeds to escape (there are in fact three such holes, but only two are visible from the front). Much rarer, but very characteristic of this species assemblage, is small-flowered catchfly *Silene gallica*. This has declined seriously in Wales, having been recorded from 74 sites but now found regularly at only five. Of these, only three are in arable fields (the others are on a dock wall and beside a railway line) but all of them are protected, either through Agri-environment schemes or designation (one site is actually within the first Welsh SSSI notified for the quality of its arable fields). Another highly characteristic species is annual knawl *Scleranthus annuus*, a plant found on the driest of shallow, shale-rich soils and which has again declined enormously in the last 30 years.

Corn marigold
Chrysanthemum segmentum

Don Berwick

Arable species are increasingly being studied thanks to the declines they have suffered. Many appear as threatened on the New Red List (www.jncc.gov.uk), which looks more closely at levels of decline in Britain rather than simple rarity. Thus corn marigold is regarded for the first time as Vulnerable, even though it remains widespread in some areas. As part of this work, Plantlife is compiling a list of sites in Britain that are nationally and internationally important for arable species (the Important Arable Plant Areas project). If you know of excellent sites in your area, please send species lists to **trevor.dines@plantlife.org.uk**

***Trevor Dines** is Swyddog Plantlife Cymru/Plantlife Wales Officer*

Green **Bookshelf**

FUNGI

Brian Spooner and Peter Roberts
Collins New Naturalist 2005
£25 Paperback ISBN 0-00-22015-4
£40 Hardback ISBN 0-00-220152-6

Fungi is the latest and most substantial volume (at 594 pages) to be issued in the outstanding *New Naturalist* series. Collins are to be congratulated on the revival of what seemed to be a faltering series and in attracting such worthy and hard worked authors to produce another outstanding volume. As senior mycologists at Kew, the authors have had to shoulder an increasing burden of enquiries as museum-based mycologists have become all but extinct in Britain. This volume will undoubtedly stimulate interest and increase that burden, since there is no way that once you have read it, or even dipped into it, you will ever view the living world in the same way again! This is an account of another kingdom just as diverse, complex and exciting as the plant or animal kingdom and yet one that remains largely hidden from us.

Its origins appear to be many and in most cases extremely ancient. Our knowledge has expanded in such leaps and bounds in the last few years that even the most seasoned amateur mycologist cannot but be left gasping at the dramatic revelations the authors have here so skilfully reviewed for us in the opening chapters. Potato blight and the water fungi are revealed as having more to do with brown seaweeds and other algae than the rest of the fungi. Clubroot attacking your cabbages is really a protozoan and a member of the animal kingdom. Puffballs are closely related to mushrooms, earthballs to the cepes or boletes and all sorts of families of more 'normal' fungi have developed the lifestyle of truffle.

The full diversity of fungi has yet to be appreciated. Over 460 million species worldwide is an educated guess, with at least 12 thousand in Britain. We are led chapter by chapter through the diversity of the habitats they occupy. Their predatory nature is revealed. Recent work has shown that one tree acquired a quarter of its nitrogen requirements from fungi associated with its roots. Not too surprising, until you learn that the fungus had got the nitrogen by trapping springtails – small soil arthropods – on sticky knobs on its feeding strands which spread through the soil about the tree. Oyster fungi rot wood, rendering it more available for nematode worms. The fungus then traps and eats the nematodes. This is just a glimpse of the role fungi play in recycling, storing and releasing nutrients. Without them our life would be impossible. There are chapters on fungi as food, in folklore, on the way they affect our health and on the remarkable way they have adapted to habitats we have created, from the fabric of our homes and gardens (150 species recorded on woodchip mulches in gardens) to the inside of the Chernobyl nuclear reactor and on space stations. In a concluding chapter we are confronted with the unique problems of their conservation.

This is a big read - but it opens up a whole kingdom and is entirely complementary to John Ramsbottom's *Mushrooms and Toadstools*, published in this series in 1953. The dust jacket is wonderfully traditional. The typeface and layout has departed from the traditional to create a more modern feel. It seems a bit 'mid-Atlantic' to me and I am not sure I like the non-justified right hand margins. Errors of fact and of typography are few. These quibbles are minor. This book will stand as a remarkable volume in this much loved series.

Ray Woods

MEMORIES OF WELSH ISLANDS

Mary E. Gillham
Dinefwr Press, 2004,
£14.50
ISBN 1-904323-08-1

Reading Mary Gillham's book is rather like wandering across one of her beloved islands: you set out with the intention of, perhaps, learning about fluctuations in puffin populations, but along the way you are distracted by a rare plant not seen there since 1906, or a delve into the geology of the strata, or you are reminded of an anecdote about a former lighthouse keeper. At the start of the book she quotes Peter Conder, warden on Skokholm: "If it is on the island, we are interested - be it rocks, weeds or insects." For the author, this would extend to the people, the food, the

wild and domestic animals, and the vagaries of tide and weather, and it is these personal memories that are the most interesting. Mary Gillham, now in her eighties, has led a remarkable life travelling the world, and the chapters recounting her early, post-war days as a volunteer on Skokholm are the most evocative. At 406 pages, and nicely illustrated throughout, this is perhaps a book best dipped into when an interest in a particular island takes you there, rather than read from cover to cover. It is certainly a book to visit to gain any understanding of the complexities and detail of Welsh island life.
Mandy Marsh

THE DORMOUSE

Paul Bright and Pat Morris
Available from **The Mammal Society** (Tel: 020 7250 2200)
£3.50 (incl. p&p)
ISBN 0 906282 53 5

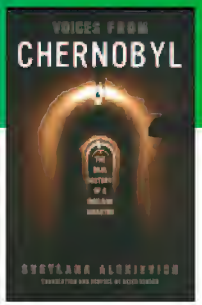
Those of us whose first introduction to dormice was through the pages of *Alice in Wonderland* might be pleased to learn the reason behind the dormouse's sleepiness at the Mad Hatter's tea party: dormice not only hibernate through the winter, they are quite likely to drop off through the summer too. If food is scarce, as it often is, they enter a state of torpor to save energy. They thus spend a large part of their lives not actually doing very much, but who are we to criticise that? They need secure shelters while torpid (teapots spring to mind) to protect them from predators, and much has been done to encourage them by providing suitable nest boxes. Like all the booklets in this Mammals series, this is a comprehensive account of its subject. If you don't mind the indelicacy of the opening page (full frontal male and female genitals), it is an absorbing read from cover to cover.
Mandy Marsh

VOICES FROM CHERNOBYL: THE ORAL HISTORY OF A NUCLEAR DISASTER

Svetlana Alexievich,
translated by **Keith Gessen**
Dalkey Archive Press
(www.dalkeyarchive.com)
£13.99, hardback
ISBN: 1 56478 401 0

It is a well known fact that more than 300 Welsh sheep farms monitor their stock for excessive levels of radioactive contamination. Presumably this monitoring prompts them to remove some animals from the food chain. I assume monitoring will continue for decades to come, possibly longer. And all because of an accident at the Chernobyl nuclear power station in Belarus almost 20 years ago.

The word Chernobyl still terrifies, and rightly so. The fire at the station in 1986 was the world's worst nuclear accident. Yet despite the notoriety of the word Chernobyl, little has been written about the accident that isn't largely scientific in nature. All that has changed with the English translation of *Voices from Chernobyl*. It is difficult to describe the power of this book. By giving us the voices of people who lived through the accident, it has perhaps given us a new opportunity



to mourn and to understand the scale of environmental destruction. It is a tremendously sad book and a courageous one to have produced. Here are the people who can remember the confused response of authorities, the thousands who died putting out the reactor fire and the thousands more who have died since from radiation poisoning. Everywhere are laments for the now poisoned forests, streams and peasant farmland of Belarus. "The women in the villages…crossed themselves. We showed up in their yards like demons. They didn't understand why we had to bury their gardens, rip up their garlic and cabbage. The old women would say: 'Boys, what is this – is it the end of the world?'" says one account. Occasionally, there are worrying comments about continued failures to ensure that radioactive equipment and food from the area doesn't enter the global food chain.

There are no definitive explanations of why the accident happened or why the authorities failed to provide protective iodine to the population once the scale of the poisoning became clear. Nevertheless, an intelligible picture emerges: of leaders caught unawares, of a lack of accountability, of a failure to protect the people. It may be a picture of the USSR near the end of its days, but it's not too difficult to imagine something similar taking place in another place, another time, under a different political ideology.
Erin Gill

Cymru a'r byd

Mae'r strategaeth genedlaethol gyntaf ar gyfer yr amgylchedd yn cael ei chanmol fel sy'n briodol. Ond mae'r ddogfen ymgynghori'n codi un cwestiwn mawr iawn – a ddylid newid y teitl i *Ein Hamgylchedd Ein Dyfodol Pwy sy'n talu?*

Mae'r strategaeth yn cael ei gwerthu fel fframwaith, sy'n dod â'r polisïau presennol sy'n ymwneud â'r amgylchedd at ei gilydd, yn hytrach na chreu agenda newydd. Mae hyn yn awgrymu na fydd siec wedi ei chynnwys yng nghlawr cefn y ddogfen derfynol. Mae'r Gweinidog wedi pwysleisio na fydd yn gadael i'r strategaeth eistedd ar silff, ac y bydd yn hytrach yn annog camau a fydd yn sicrhau'r canlyniadau bwriedig, ac yn arwain at waith gwirioneddol ar gyfer targedau gwirioneddol. Ond ni ellir cyrraedd targedau heb arian.

Mewn ymchwil a gomisiynwyd gan y Gynghrair Werdd yn 2003 cyfrifwyd faint o arian cyhoeddus sy'n cael ei wario ar yr amgylchedd bob blwyddyn. Amcangyfrifwyd bod diffyg o £1.7 biliwn rhwng yr hyn sy'n cael ei wario ar yr amgylchedd, a'r hyn sydd ei angen er mwyn cyrraedd targedau llywodraeth y DU ar gyfer yr amgylchedd. Mae angen tua 20% yn rhagor o wariant er mwyn i lywodraeth y DU gael yr amgylchedd y mae eisiau ei gael. Dylai hyn atgoffa'r llywodraeth yng Nghymru bod angen adnoddau ariannol i gyd-fynd ag addewidion, wrth iddi bennu targedau er mwyn sicrhau gwelliannau gwirioneddol i'r amgylchedd.

Mae gwelliant gweledol mewn bioamrywiaeth yn un o uchelgeisiau'r strategaeth ond mae pryder yn barod nad oes digon o adnoddau ar gyfer monitro a gorfodaeth yng nghyswllt SoDdGA. Mae NFU Cymru wedi awgrymu y bydd cyllidebau llai yn golygu y bydd llai o ffermwyr yn cymryd rhan mewn cytundebau rheoli SoDdGA; yr union bobl sy'n rheoli'r elfen amgylcheddol bwysicaf yng nghefn gwlad Cymru. O ystyried bod angen cynnydd aruthrol yn y niferoedd sy'n cymryd rhan mewn cynlluniau amaeth-amgylcheddol er mwyn i Gymru gyflawni ei rhwymedigaethau bioamrywiaeth – cyfeiriwyd at ffigwr o 10,000 o ffermydd – mae prinder arian yn fater sy'n peri pryder.

Wrth gwrs, fel y mae Strategaeth yr Amgylchedd yn nodi, nid y llywodraeth yw'r unig un sydd â chyfrifoldeb am yr amgylchedd: beth am y sector gwirfoddol? Un peth yw cyfrifoldeb, ond mater cwbl wahanol yw gallu fforddio gweithredu, ac mae cyrff anllywodraethol yn gweld rhai patrymau sy'n peri pryder. Mae datblygu'r Gronfa Loteri Fawr - merch y Gronfa Cyfleoedd Newydd a'r Gronfa Gymunedol - wedi peri pryder, yn anad dim gan fod y Loteri yn draddodiadol yn llenwi bwlch a adawyd gan gronfeydd eraill. Mae'n edrych yn debyg y bydd yr amgylchedd yn cael ei ystyried fel thema drawsbynciol yng Nghymru yn hytrach na bod â chronfa benodol fel cronfa Enfys y mae galw mawr am arian ohoni. Mae cronfeydd llwyddiannus iawn fel Amgylchedd Cymru yn derbyn llawer o geisiadau yn barod ac mae'r gystadleuaeth yn siŵr o gynyddu.

Bydd Cronfa Loteri Fawr newydd Lloegr ar gyfer yr amgylchedd yn cefnogi cymunedau sy'n gweithio er mwyn gwella'u mannau cyhoeddus a mynd i'r afael â phroblemau amgylcheddol lleol. Mae agwedd gymunedol i gronfeydd amgylcheddol yn fwyfwy amlwg ynghyd â ffocws ar sicrhau nifer o fannau glas y gall pobl fynd iddynt yn rhwydd a mwynhau eu hunain. Mae hyn yn golygu dim arian os nad oes cymuned amlwg neu os nad yw pobl leol yn cael eu cymell gan bryderon amgylcheddol, a allai arwain at anawsterau ar gyfer sefydliadau gyda chyfrifoldebau cenedlaethol yn hytrach na rhai lleol. Beth am gynefinoedd neu dirweddau mwy; pa gymuned fydd yn gwneud cais am arian i wella amgylcheddau anghysbell neu'r rhai nad yw pobl eisiau eu defnyddio ar gyfer teithiau cerdded a phicnics? Efallai y dylai cyrff anllywodraethol ddechrau hyfforddi ein ffrindiau blewog a phluog i ysgrifennu ceisiadau grant fel eu bod yn gallu gweithio fel cymunedau i wella eu hamgylchedd lleol.

Mae Strategaeth yr Amgylchedd yn cadarnhau fel sy'n briodol ein bod yn rhan o'r amgylchedd a bod amgylchedd o safon uchel yn hanfodol ar gyfer bywyd o ansawdd da. Mae'r neges hon wedi cael ei gwerthu mor llwyddiannus gan amgylcheddwyr fel bod perygl iddi gael ei gweld fel yr unig neges sy'n talu. Nid yw gwarchod bioamrywiaeth er ei les ei hun, a sicrhau amgylcheddau o safon uchel nad ydynt yn rhan o gymuned yn waith rhad o bell ffordd, ond ymddengys bod arian i dalu amdanynt yn symud i'r rhestr o rywogaethau sydd mewn perygl.

HANNAH PITT
Swyddog Gwybodaeth y Cynulliad Cyswllt Amgylchedd Cymru

Wales and the world

Hannah Pitt

The arrival of the first national strategy for the environment is rightly being lauded. But the consultation document does raise one rather large question – should it be re-titled *Our Environment Our Future Who's paying?*

The strategy is being sold as a framework, the bringing together of existing policies relating to the environment, rather than a new agenda. This suggests that the final document will not have a cheque tucked inside the back cover. The Minister has stressed that he won't let the strategy sit on a shelf, rather it will drive progress towards the desired outcomes, and lead to real work on real targets. But achieving targets ain't cheap.

Research commissioned by Green Alliance in 2003 calculated the year's public expenditure on the environment. They estimated that there was a £1.7 billion shortfall between what was being spent on the environment, and what was needed to achieve the UK government's targets for the environment. Around 20% extra spend is necessary for the UK government to get the environment it wants. This should remind the government in Wales that fine words must be matched with financial resources, as they set targets for delivering real environmental improvements.

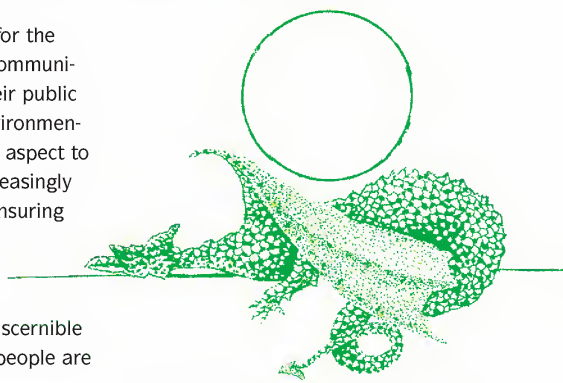
Visible improvement in biodiversity is one ambition of the strategy but there is already concern that resources are inadequate for monitoring and enforcement relating to SSSIs. NFU Cymru have suggested that budget squeezes will see fewer farmers participating in SSSI management agreements; that's the very people who manage the most environmentally important slice of the Welsh countryside. Considering that a huge increase in participation in agri-environment schemes – a figure of 10,000 farms has been mooted – is necessary for Wales to meet biodiversity obligations, the issue of limited funds is disturbing.

Of course, as the Environment Strategy points out, it is not just the government which has a responsibility for the environment: what about the voluntary sector? Responsibility is one thing, but affording to act on it is quite another, and NGOs are noticing some worrying trends. Development of the Big Lottery Fund (BLF) – daughter of New Opportunities Fund and Community Fund – has caused concern, not least because the Lottery traditionally filled a gap left by other funds. Signs are that the environment will be treated as a cross-cutting theme in Wales rather than having a dedicated pot similar to the oversubscribed Enfys fund. Highly successful funds like Environment Wales are already overwhelmed and competition is only set to increase.

The new English BLF fund for the environment will support communities working to improve their public spaces and tackle local environmental problems. A community aspect to environmental funds is increasingly apparent with a focus on ensuring numerous accessible green spaces for people to enjoy. This means no money where there is no discernible community or where local people are not motivated by environmental concerns, and could result in difficulties for organisations with a national rather than local remit. What about habitats or landscapes on a larger scale; which community will apply for funds to improve remote environments or those which people don't want to use for walks and picnics? Perhaps NGOs should start training our furry and feathered friends to write grant applications so they can work as communities to improve their local environment.

The Environment Strategy rightly reaffirms that we are part of the environment and that a quality environment is essential for quality of life. This message has been so successfully sold by environmentalists that there is a risk of it becoming the only message which pays. Protecting biodiversity for its own sake, and securing quality environments which are not part of a community are by no means free but it seems that funds to pay for them are moving onto the list of endangered species.

HANNAH PITT
Assembly Information Officer for Wales Environment Link



Geoff Gibbs

News from Ynys Enlli (Bardsey Island)

Geoff Gibbs

Tŷ Pellaf vegetable garden

Corncrake returning?

The corncrake was a regular spring migrant on Bardsey in the early 1950s, and bred in 1953 and 1954, and also in 1972, a time when the Observatory was closed. Since 1992 there have been a few breeding attempts in Wales, mostly on Anglesey. So a calling bird on Bardsey for four days in May last year was most welcome. Even more exciting was this year's bird, which dropped in on May 13th, and carried on calling until July. Its chosen habitat was a clawdd wall and nettle strip along the edge of the Tŷ Pellaf vegetable garden (see picture). After a number of sleepless nights, Libby Barnden remarked darkly that she could see why it was a rare bird. Unfortunately the endless calling failed to attract a mate, so let's hope for better luck next year.

Gems from the Bardsey Report

The Bird Observatory's excellent report for 2004 is now available (details on www.bbfo.org.uk or phone 01626 773908). Its cover is graced by a beautiful waxwing, present outside Cristin (the Observatory's home) on 23rd October. This was only the second record for the island.

Lighthouse attraction

Perhaps the highlight of the year was a lighthouse attraction on 24th April, which brought in large numbers of night migrants including 360 grasshopper warblers (is this a record for this species at a single site?) and 1500 willow warblers (33 killed at the light). Over 1600 grasshopper warblers have been ringed on Bardsey, but only three had been recovered by 1996. Its skulking habits make for an extremely low recovery rate! Based on a couple of recoveries, it is likely that the grasshopper warblers were on their way to Ireland.

Making the data more accessible

Bird Observatories in general have been excellent at maintaining daily records of birds present, but very poor at making use of these data. Bardsey has been active in reversing the latter aspect, and Mike Archer's article describes how the daily log (for the seasons since 1953) has been transferred to a digital database. Various problems came to light during the process, including the well-known 'tick' or 'dot', meaning 'present'. Thus house sparrows on Bardsey were 'present' until they disappeared around 1971 (the exact date is unknown as the Observatory was closed in 1971-3). Other simple codes used were no doubt very clear at the time, but are now indecipherable.

Ringing and re-trapping records for Bardsey's Manx shearwaters have been computerised (the data are already being analysed), with willow warblers (45,000 ringed on Bardsey) and the remaining seabirds in the pipeline. An example for other bird observatories to follow!

Lichen update

An article by Tony Fletcher from the Leicestershire Museums Service updates his lichen studies since 2001. The populations of *Teloschistes flavicans* (the handsome and uncommon golden-

Roy Woods

Lecanora conizaeoides

Golden-hair lichen

John Ratcliffe

hair lichen) were counted. One new species, *Lecanora conizaeoides*, is an interesting find, as it is an indicator of high sulphur dioxide levels. On Bardsey it is found on pine fence posts close to diesel generators and regular bonfires sites, and is unlikely to spread, we hope! Another reason for looking at renewable energy sources on Bardsey.

Janet Baxter

Bottlenose dolphins

Cetaceans

A detailed report by the Whale & Dolphin Conservation Society describes sightings around Bardsey in 2004. Watches were performed from four points on the island, two points on the Llŷn Peninsula and on boat trips from the island. Up to 53 harbour porpoises and three Risso's dolphins were seen from the island, while boat trips to the deep-water trenches to the west found three groups of Risso's on 31st August, with at least 20 present. Common dolphins came close to the boat in the same location on 15th August. Up to 12 bottlenose dolphins passed through Bardsey Sound on 11th April, and this species was seen more frequently from the boat en route from Pwllheli to Bardsey.

In Summer 2005, dolphins hit the national news when many thousands appeared in Cardigan Bay. Such large gatherings are unusual but not unknown. Dolphins are hard to track, so some of these may have come long distances in search of plentiful fish in warmer waters. Another indication of global warming, perhaps?

Memories of Welsh Islands by Mary Gillham

Mary's recent book is reviewed on page 42 but we take the opportunity to mention her Bardsey account. This describes a visit in June 1984, when the island had been heavily grazed by sheep and ponies for over 10 years. Twenty years on, the boat from Pwllheli takes only one hour to cross, not the three hours quoted. The tenant farmer is able to manage the island environment more carefully, with Welsh black cattle and sheep, and more fences in place. The maritime heath at the north-west corner and on the southern end are in a better state as a result, as are the damp pastures down the middle of the island.

Note: *an analysis of the 2005 breeding season for seabirds on Welsh islands will appear in the next edition.*

Hysbysfwrdd / Noticeboard

If you would like your wildlife event to feature on this page please contact Mandy Marsh on 01248 385574 or email m.marsh@ccw.gov.uk

North Wales Wildlife Trust

LACEY LECTURE 2005 *'Life and the Earth: interwoven histories'*

4 Nov 7.30pm John Phillips Hall, University of Bangor.

This year's lecture will be given by Professor Aubrey Manning, OBE, FRSE., FIBiol., Emeritus Professor of Natural History at Edinburgh University. Aubrey Manning is a distinguished animal behaviourist and a past chairman of Scottish Wildlife Trust, and is well known as a science communicator from his BBC TV series *Landscape Mysteries, Earth Story, and Talking Landscapes*. In the latter series, he used clues in the geology, natural history and archaeology of the landscape to explain its mysteries and reveal its ties to human activities.

Tel: 01248 351541

Shared Earth Trust

DENMARK FARM CONSERVATION CENTRE

5 Oct *Ponies for Pastures*

Are you a recent or potential pony owner, or have some land for grazing? This unique course will teach you how to care for ponies kept on grass and at the same time benefit wildlife.

15 Oct *Managing for Wildlife Forum*

A chance to get together with like-minded landowners and conservationists to discuss managing your land for wildlife. An informal day with a mix of short presentations on various aspects, plus discussion session and field visit. Please contact us for a more detailed content and schedule.

For details and costs incl. concessions contact **01570 493358** or **set@denmark-farm.freeserve.co.uk**

Butterfly Conservation Wales

BROWN HAIRSTREAK EGG SEARCHES

Autumn/winter

For further information about searches near you please contact Butterfly Conservation **wales@butterfly-conservation.org** or **0870 7706153**.

Fenn's, Whixall & Bettisfield Mosses

AUTUMN/WINTER EVENTS

25 Sept *Fungal Foray on Fenn's Moss* with Roy Mantle, Shropshire Fungus Group. Bettisfield old railway station, 2pm. **www.britmycolsoc.org.uk**

Slideshow: 10,000 years on the Mosses by Joan Daniels

9 Nov 7.30pm, Edward German Room, Whitchurch Civic Centre

23 Nov 7.30pm, Senior Club, Chapel Street, Wem

Free refreshments (no need to book).

4 Dec 10.30-1.00 *Come and cut a Xmas Tree*

A495 Fenn's Bank lay-by, with Ian Cheeseborough – to celebrate International Volunteers Day. **www.seeyn.org**

All events except talks MUST be booked in advance by contacting Joan Daniels on **01948 880362** on weekdays, or **07974 784799** on weekends and are free unless stated (**e-mail joan.daniels@english-nature.org.uk**, or **visit www.english-nature.org.uk**). Or explore the Mosses and Llangollen Canal at any time by following the *MOSSES TRAILS*, from Morris's Bridge or Roundthorn Bridge, Whixall.

The Wildlife Trust of South & West Wales

AUTUMN/WINTER EVENTS

These are just a few of the many events on offer. For a full list contact WTSWW on **01656 724100**

Pembrokeshire Bird Group

Details from Trevor Price, **01437 779667**

23 Oct 10.30am. *St David's peninsula for migrants* with John Best.

20 Nov 8.30am. *Ynyshir RSPB reserve.*

26 Nov *Annual Birdwatchers Conference* at Texaco. Book early to avoid disappointment.

11 Dec 11am. Penclacwydd WWT Reserve.

East Carmarthenshire Group

Details from Denys Smith, **01558 822152**

10 Nov 7.30pm. *Annual Public Lecture 'The Revival of the Otter in Britain'*, with Geoff Liles, Dyfrig Jones and Neil Matthews.

8 Dec *The Nature and Beauty of Dyffryn Tywi*, with Ken Day, photographer and naturalist. Prints available.

South Pembrokeshire Group

Details from Maddy Berridge, **01646 651218**

10 Nov 9.30-12pm *Christmas Craft Fair*, Pembroke Town Hall.

Gower & Glamorgan West

Details: Joan Darbyshire, **01792 207254**

17 Dec 10.30am *Whiteford.* Survey the beach for the Marine Conservation Society.

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Hyd/Oct 31 – 2 Tach/Nov *Mynediad i Bawb – Rheoli a Darparu Mynediad i Gefn Gwlad i Bobl ag Anableddau.*

Access for All – Managing and delivering countryside access for people with disabilities. £245.

Tach/Nov 7-9 *Rheoli Ymweliadau Maes.*

Managing Field Study Visits. £211.

Tach/Nov 14-18 *Hyfforddiant Sylfaenol ar gyfer Wardeniaid a Cheidwaid.*

Basic Training for Wardens and Rangers. £351.

Tach/Nov 14-18 *Cynllunio Rheolaeth yng Nghefn Gwlad.*

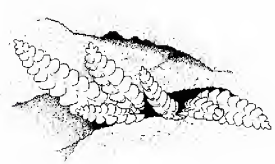
Management Planning in the Countryside. £370.

Rhag/Dec 5-9 *Mynediad a Hawliau Tramwy Cyhoeddus, y Gyfraith a Rheolaeth.*

Access and Public Rights of Way, Law and Management. £371.

Rhag/Dec 13-15 *Cyflwyno Effeithiol.*

Presenting with Impact. £294.



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Back issues of *Natur Cymru* (Nos 2 - 15) are available priced £2.50

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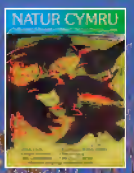
Number Rhif 14



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